

Plane Talk

JANUARY • 1945



Starting the Mission

Good Neighbors at Natal • Fire Over Burma • How We Got Our Airpark
Planes for Tight Places • When Johnny Comes Flying Home • Our Greenland Outposts

Plane Talk

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Our Cover

Reproduced from a striking AAF kodachrome, this month's cover shows you how a Liberator at an airfield in Britain is given its go-ahead signal to taxi to the runway, for its take-off on a daylight mission over Germany.

Our Indebtedness

Often some of the most interesting material in Plane Talk comes to us from men in the Army Air Forces and the Navy whom we can not thank in person. It is not the policy of the Services, for instance, to give personal credit to the photographers whose splendid work we are often privileged to reproduce here.

Likewise, manuscripts are now being dispatched to us from the various fronts, sometimes direct and sometimes via Washington, often without indication that would permit us to give an author's credit line, which we like to do. "Fire Over Burma", on Page 13, was such a manuscript. Similarly, the fine photograph of a Liberator bombing strike reproduced on Pages 16-17 reached us from the 13th Air Force without our being able to say a direct Thank-you.

To our unknown reporters, then, the editors want to express appreciation, in their own behalf and in the name of Consolidated Vultee Aircraft Corporation.

P.R.O. Copies

Some of the Public Relations Officers in the Air Forces who have been of assistance to us receive Plane Talk regularly. We shall be glad to send copies to any P.R.O. who requests them.

When Johnny Comes Flying Home

Fred B. Barton, who has visited with our airmen from England around the world to China, tells you about Liberator men 1

Help Wanted

Consolidated Vultee has built over 30,000 planes since Pearl Harbor, its President reports, but workers are still needed 4

Our Greenland Outpost

Greenland represents, for America, one of the most important spots in the world today, and Martin Sheridan explains why 6

Until We Get to Berlin

Colonel Robert R. Gideon points up our air war over Europe by telling what we have accomplished and what still lies ahead 8

We Save Our Airmen

Captain John A. De Chant, USMC, tells how Catalinas are concerned with the fact that we're a pilot-crazy nation 10

Fire Over Burma

To bail out was almost suicide, to keep going seemed impossible, but two faltering engines were enough to get this Liberator home 13

How We Got Our Airpark

Some would call it an Airport—but Airpark is the modern term for this necessity which, says Lieutenant Brown, any town can have 14

Coming to Grips With the Japs

We are making enormous progress in gaining the Pacific air bases we need to destroy the enemy's resources for war-making 16

5 Old Faithfuls

The Liberator is a Pacific Ocean, says Sergeant Cunningham, who describes the beginnings of American airpower there 18

The British Use a One-Tailed Liberator

It is a modification that departs from the familiar silhouette, and British use of it is making news on the international airways 20

Packaging Planes and Their Parts

Shipment of new planes and spare parts to our global air forces requires highly specialized packaging to assure their safe arrival 21

They Shall Be Comforted

Sally MacDougall, of the New York *World-Telegram* staff, tells what happens when one of our airmen suffers grievous wounds 22

Good Neighbors at Natal

Brigadier General Greely reports his visit to one of the most important air bases which our nation has developed 25

The New "Voyager 125"

It is a remarkable plane for personal use on which Stinson can begin production as soon as war-time restrictions are lifted 28

Planes for Tight Places

The Flying Jeep is almost insignificant in size, but it is doing one of the most exciting and useful jobs of the war 29

Speaking of Airpower

A great organization like Consolidated Vultee has occasion to do it millions of times a year—and this new system speeds the words 32

Edited by Hill and Knowlton for the Consolidated Vultee Aircraft Corporation and published every other month. Text and pictures have been cleared for publication with Government authorities. Text of any article contained in the magazine may be reprinted with or without credit to Plane Talk. Copies of most pictures, except those credited to commercial news agencies, can be made available to editors upon request. While manuscripts are not solicited, first hand accounts of experiences by men in the air forces at the fronts will be given careful consideration. All correspondence and address changes should be addressed to the office of Hill and Knowlton, Room 3301, 350 Fifth Avenue, New York 1, New York.



By Fred B. Barton

He will have some experiences behind him you can't pry into. Mr. Barton, who has been living with our airmen, tells why.

THE war is far from over, but it is not too soon for you to begin meeting the new kind of Liberator man who is coming home when his work is done.

In one sense all our airmen are Liberator men, no matter what plane they service or fly. For their daring has already freed America from the greatest military threat ever levelled against us.

When I left America in 1943 to visit with our airmen around the globe — as far as India and China — all our coasts were darkened, for fear of the enemy. When I returned for the 1944 Christmas — after flying most of the way around the world, usually in Liberators at 200 miles or so an hour — I found all our coastal cities blazing with lights. When Johnny comes home from the airforces, thank him for that.

You may possibly still feel robot bombs here. But the serious threat to America's security is over. And it was airpower in the hands of Johnny which freed us from it in such brief time. So thank him. But don't gush. Remember he's a man, now.

He is probably wearing a silver identification bracelet on his right wrist when you see him, and maybe a couple of new rings on his left hand. Tattooing too, perhaps.

If he's a member of a combat crew, he may have a studied nonchalance about his clothing, wearing leather flying-jacket and sun-goggles even to meals. Or again, needing his own self-respect, he may become fastidious as to hair and clothing, in a way to surprise you.

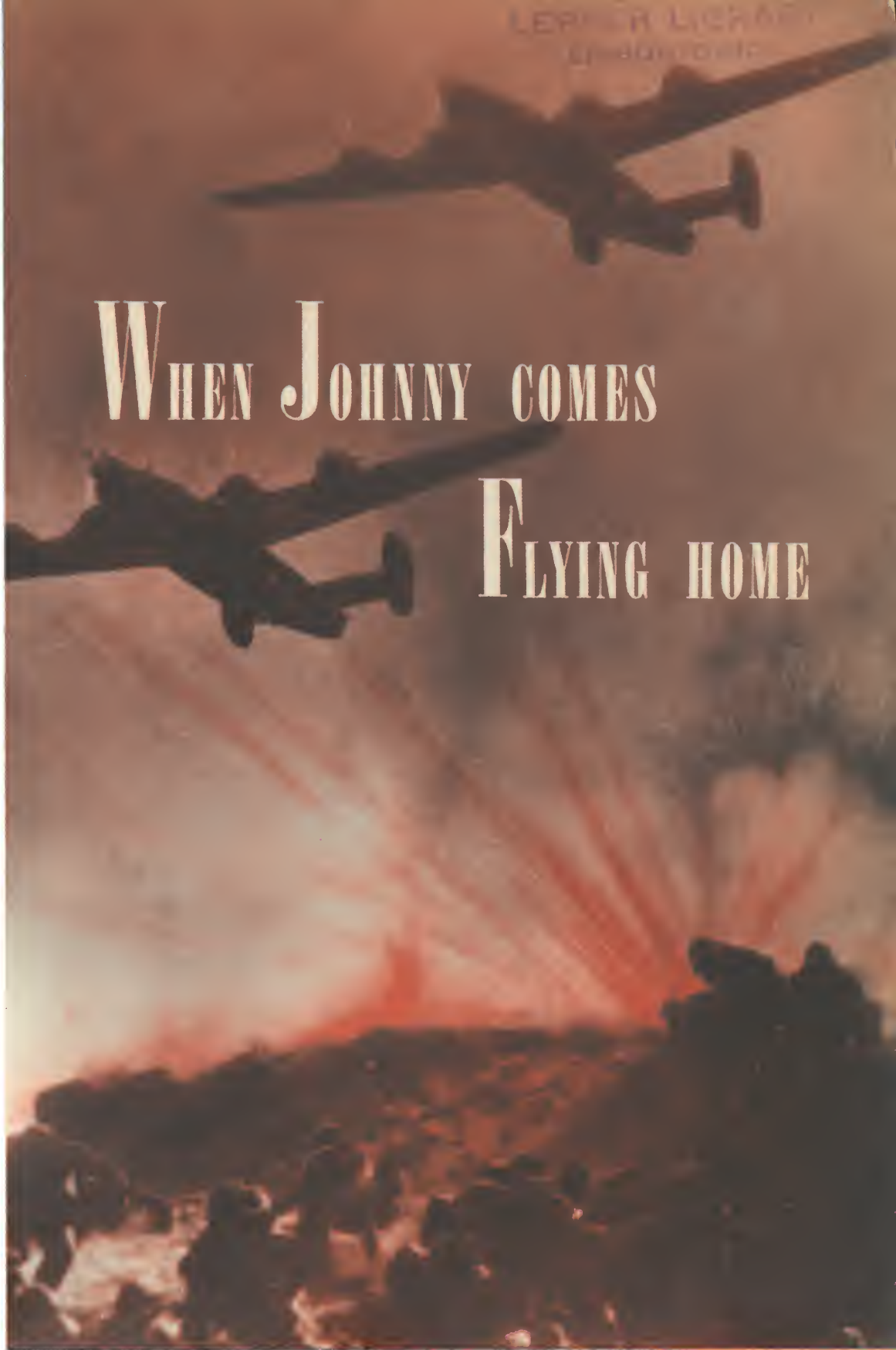
He has learned to keep his belongings in small space. A foot-locker and a few hangers, or maybe just a barracks-bag, hold

his clothing and his treasures. Remember when he littered skates, baseball bats and spare clothing from hallway to attic? Not in the Army, he doesn't.

If he seems abrupt with servants it will be because he has acquired some of the British method of giving short and clear commands to his bearer. Even GI's have bearers throughout Cairo and India, and the bearers in turn have their coolies to wait on *them*. Then again, he may have

grown understanding of servants, may be more sympathetic. Why try to generalize? Hardly a situation in the Army for which you cannot find sober proof that the reverse is true.

He may almost have forgotten how to read a newspaper. Overseas what few papers he has seen have often been three or four months old. He has skimmed the obituary and marriage columns, looking for familiar names, like any shipwrecked sailor.



A.A.F. Photo

As for news, he has matched his experience on the inside of world events with what gets printed, and may have lost faith in the accuracy and importance of daily papers. The weekly newsmagazines, on the other hand, may have gained in his esteem.

In Britain, and in the Far East, he has been driving on the left, but he doesn't like it. On official documents he has been typing the date in the British style: 10 February 1945. He has seen his name butchered from Jonathan W. Smith to J. Smith or even Smith, J.

He has lived for 18 to 30 months overseas under rationing and he accepts it, for he finds that Sergeant Jones who doesn't smoke but likes candy can make advantageous swaps with Corporal Smith who doesn't go for candy but likes two packs of cigarettes a day. But he never wants to stand in line for anything again. He has had to line up for meals, for rations, for pay, for inoculations, for inspections of every variety. Back home he'll use the telephone to demand delivery and a lot of service.

He may have become deaf to propaganda. He has been howled at, preached at, talked to through placards until he discounts every word of advice given him. He believes what he sees, not what he hears — judges men by what they do, not what they say.

WHEN it comes to profanity, Johnny uses a lot of four-letter Anglo-Saxon words, in true Shakespearean style. Most of today's war reporting doesn't show this. Our newspapers and magazines won't print it. But books are beginning to, and the outcome may be a whole new trend to earthiness in tomorrow's literature. Johnny is probably going to sit in critical judgment on the over-fine writing of authors overly-engaged with the niceties.

He is matter of fact. Though camp movies are his favorite pastime, he has been known to walk out on movies that indulge in excessive flag-waving. Nauseating, he says. He is bored and annoyed too at Hollywood's passion for jitterbugging scenes. Why portray America as a nation of neuroasthenics, he argues?

Your American GI's abroad have learned to some extent to listen to music. They have heard good symphony programs, uninterrupted by commercial announcements, broadcast from BBC. They listen to

good symphony transcripts from home, aired over their own camp radio. They find they can listen to good music and like it: the stuff is expressive and restful.

Johnny's passionate belief that things American are better than any other stuff anywhere in the world has given him occasion to scrutinize American swing music. Here again it is difficult to generalize — but I think he is growing tired of it.

Twice a year he has been herded into the recreation hall and shown a movie explaining the articles of war, including its privileges and its penalties in time of war. With that has come a required movie on sex hygiene. The stuff rather bores him, and he'd like to get back to managing his sex affairs in privacy. On the other hand, public instruction in prophylaxis has at least taught him how to manage, if he is teachable at all. Today's low venereal disease rate in our armed forces is the more remarkable when it is remembered that millions of Americans now circulate, for their first time, among peoples who regard sex as a major human pleasure having no moral connotations at all.

With doctors Johnny has acquired a new acquaintance; he has developed a sublime faith in the powers of preventive medicine. His own carcass has been punctured variously by inoculations against typhoid, typhus, cholera, smallpox, yellow fever, bubonic plague and lockjaw or tetanus. Booster shots in the first four of these are administered every six months, if he serves in India or China, and Chinese cholera and Chinese typhus are, even in their serums, things to be remembered.

Johnny may have been in areas infested with fleas, mosquitoes, lice and incidental vermin; with cockroaches almost big enough to saddle and mount. Most other nations accept vermin calmly, just as they accept dirty kitchen utensils. But Johnny has doused himself with body-powder, has sprayed the room with a pyrethrum spray that kills even hardy crickets. In nations where athlete's foot is an accepted circumstance, made worse by every American's insistence on wearing shoes, he has stayed reasonably pure, thanks to GI foot-powder. Thousands have fallen on Johnny's right hand and tens of thousands on his left; yet the perils of the dark ages have not come nigh him. If this sort of medical care is socialized medicine, he will not protest.



Still, Johnny is tired of being pushed around, and yearns to get into business for himself. Some of his friends have only vague ideas; others have thought it out. "I've spent 12 years in the soft drink business, and if I can make money for other people I think I can make it for myself. The new GI bill of rights will stake me to enough to get started on," a mess sergeant told me in Kandy, Ceylon. He plans a home-delivery service. Other GI's I've talked to plan to open shop as a public accountant, or do welding and tinkering, or repair bicycles, or make or invent or market plastics, or go back to school and study things like chemical engineering.

In clothes, you can look for tastes to run wild. Johnny has been in a situation where, to paraphrase Henry Ford in referring to the old Model T, he could wear any color as long as it was OD — olive drab. One sergeant of my acquaintance, back in China, prides himself on owning a robin's-egg-blue undershirt. He does not dare wear it on Saturday mornings for inspections; he once got giggled for that. But on other days it



A.A.P. Photo

Injured Liberator crewman returned from a bombing attack on German war-plant is being made comfortable by Medical Corpsmen.

had spent in arriving from home, where they were located, and the outfit's identity.

You learn to shut up. Perhaps the Army overstresses the unpleasant side of surveillance, understresses police work as protection for the innocent. Perhaps we are breeding a dislike for being policed. Or again, in a world where Britain is talking even now of continuing individual identity cards through peacetime, we are face to face with a world where the old-style freedom of movement and freedom of expression are things of the past. Johnny hasn't yet been told about that.

Johnny has an idea that, wherever you are and whatever you want, it can be arranged, provided, of course, that you have the money and that you ask no questions. In a world threatened by inflation commodities are often worth more than money in exchange.

There's a set-up known everywhere as the black market, and possibly Johnny has seen some of its workings. Black market prices for a fifth of Scotch run as high as \$35 in Iceland and other places where GI's are located in quantity. In Colombo the captain of a U.S. merchantman told me that hotel rooms in town were only available through the black market at \$10 a night. "If you get hold of a couple of bottles and want to take a friend ashore and have a time, there's the room," he said. In Kunming I was told you can buy not only "Parker 51" fountain-pens and cameras but even a U.S. motorcar on the black market.

These black markets may be one of tomorrow's huge unsolved problems, due to be even worse if rationing is administered on a basis of self-importance and rank when these soldiers get back home. Your GI's are not inclined to have much patience with the idea of doing without or standing in line, once this war is over.

Johnny will come home with a contradictory attitude toward personal belongings. Every month he goes to the camp PX — Post Exchange — and buys whatever he is permitted to buy: his month's ration. Never mind if he already has razor blades enough to last him a year, he'll probably buy more because that is his privilege. He hoards as a squirrel stows away nuts against a wintry day. And yet at times he will share

his last bar of sweet chocolate with a friend, will give away clothing, will show rare generosity. Contradictory again.

In friendships he may have become either gregarious or selective; may indeed have found that his best friend is himself. This war's Army has been trained in so many different centers and been shuffled and re-shuffled so many times that Johnny has come not to expect close and lasting friendships. Damon and Pythias loyalty is fairly rare in this Army. But instead of one true-to-the-end friend your Johnny probably knows a couple of dozen men from all over the country whom he admires and respects and whom he hopes to see again at later times in his life.

WHAT kind of minds will these returning soldiers have?

You can't blame them for being a little conceited. There's "Togglin' Ed," of the 8th Air Force, proud of his prowess as leading bombardier of his squadron. A chap like "Togglin' Ed" lets loose, by toggling the small releasing switch, more power for destruction than any previous single individual of your acquaintance or mine. He has been a god of vengeance. And he knows it.

Think of the picture. You and your statesmen take a lad like Ed fresh from school. You tell him the world is sick and that he can cure it by bombing whole cities to hell. Civilizations that have grown up since the Dark Ages he is to harass and destroy with his fire and his bombs.

You can't blame these men for having kaleidoscopic minds. One minute they are heroes in their own eyes; the next they have blood on their souls. Rebuilding the world is not one of their plans. That may come later, but right now they want to get back home and start a family.

Some of them have given themselves self-training during the war, but the pressure has been against any organized program of study. Take Joe, for instance, a brilliant young pilot I knew back in England. Joe had everything: personality, charm, physique, insight, ability. He has the talents of an artist. I tried to introduce Joe to the British War Office, thinking perhaps he could toss off a recruiting poster and have the joy of achieving international fame while overseas. But he no longer could settle down to solid work.

You can hardly imagine how it is. The

gives him an individuality, a lift, a breath of life. Once back home every overseas lad may be expected to go for loud neckties, racetrack checks and hues of clothing that will rival Joseph's coat of many colors.

Your Johnny may have developed a mistrust of strangers because, in truth, the Army has encouraged him to think twice and then keep still. "I was talking when I should have listened" is a gentle piece of self-criticism you hear now and then.

The Army has its secret service, its espionage and counter-espionage, world without end. For instance: A U.S. soldier flying home on leave consented to take along some letters for a friend and mail them back in the States. When he got off the plane at Miami he was met by a secret service agent who knew exactly what he was carrying and *in which pocket he was carrying it*.

Again: a sergeant in Cairo met an agreeable stranger from his home state of New Jersey. Two days later the sergeant was called before his commanding officer. A crisp typed report listing his name revealed that he had told how many days his outfit

world becomes a place of personal and painful memories, and every man double-stars certain spots of horror in his mental Baedeker. Life becomes huge and cold and terrifying. Friendship today, heartaches and empty cots beside you before this day next week.

Bremen doesn't seem to these bombing sons of ours as a city of homes and churches; it is rather the place where hot ack-ack shot down six planes. Cologne is only the city where they try to avoid the cathedral with their fire — not a spot hallowed in days before Nazi worship of

at them when they also take some of the other commandments lightly? What can a sheltered moralist know about the terror that looms at midday when you bomb an enemy target in a fragile and inflammable bombing-plane?

I was guest at an air-base and was quizzing some pilots across the supper-table about their religion. "When you are in danger and you whisper a prayer, what kind of a prayer do you say?" I asked.

One short-haired navigator across the table from me bellowed forth an answer. "You have no right to ask such a question,"

Our airmen left us as boys and will return as men out of a world we can't conceive. But they are still Americans, however life overseas has changed them. They still cling, for instance, to their inadequate under-clothing — the mis-named "athletic" underwear that makes Americans slaves everywhere to central heat — despite the Army issue of long and woolly stuff which they bury in their barracks-bags and never use. They are prodigal in their use of water, fuel and electric-light, feeling that is their prerogative as tax-payers and the sons of tax-payers.

Yet overseas they have learned some bitter lessons about democracy and intend never to forget them. In some overseas theaters, for instance, Johnny has seen the best hotels and bars and nightclubs marked "out of bounds to other ranks," meaning

HELP WANTED!

Consolidated Vultee, like most organizations with a huge backlog of orders from the Army and Navy, still needs workers. At right, you see some workers at the Ft. Worth plant laboring on a large new bomber. This January Harry Woodhead, Company President, announced the Company had built a total of 30,159 airplanes and equivalent spare parts since Pearl Harbor. The Company's 11 manufacturing divisions made 14 different types of aircraft during 1944. For a map of all 13 divisions, see p. 32.



"Sweating her in" — a ground crew awaiting their Liberator's return with anxious eyes.

power set out to destroy enemy churches.

"You fly over Norway and you think how beautiful it is," a bombardier told me back in England. "Then suddenly the flak starts coming up to meet you. Then you quit thinking about beauty and concentrate on dropping your bombs on the target and escaping with your life."

Who are you and I to judge such men? We have taught them to kill, in defense of us. Will Nice Nellies wave the Pentateuch

he said. "You have never been in that kind of danger yourself. What do you know about dying, and being torn into pieces by enemy flak? What do you know about religion at such a time? It is really none of your business."

I accepted the rebuke humbly. I hand it on to all who will listen. Let it apply to any query relating too deeply to our soldiers' inner life. A soldier is not to be pinned to a cork like a museum butterfly.

other than officers. Johnny likes the old American way, where one man is as good as another, provided his conduct and his clothes are in keeping, as long as his money lasts.

He may reach home with a vast new respect for the engineering brains that created the Pyramids, and a lasting admiration for the delicacy breathed into marble to form the Taj Mahal. Yet I don't think you will find that Johnny comes back from this war with a broad international viewpoint.

Nor do these young men regard themselves historically. They somehow accept their fate as part of a huge social movement. Some of them grew up in such new ventures as CCC and NYA; they expect now to graduate into the alumni where the "GI bill of rights" takes them under its wing. As to who foots the bills, that is Father's worry. They have been used to worrying about other things than money, for a long, long time.



OUR *Greenland* OUTPOST



Above: PBVs anchored to loaded gas trucks in blizzard.
Below: Jeeps provide airmen with transport to the field.

U.S. Navy Photos

TO America's vital bases in Greenland we owe much of our ability to put dominant airpower over Europe in such brief time.

Literally thousands of our planes have been flown across the Atlantic, with the crews well aware that they could land at one of the several bases in Greenland should the weather close in or any mechanical difficulties develop en route.

Greenland as a weather reporting station is even more valuable to us than as an air base. The Nazis attempted to organize their own weather stations in the Arctic long before the United States entered the conflict. They realized that whoever controls Greenland weather information would have the upper hand in any trans-Atlantic air war. Some of the Nazi installations were routed only in late 1944.

We got the Nazis out in time. But two years ago our own weather maps of this area were still woefully incomplete. Our planes were flying the North Atlantic only in summer. They had to be rerouted the long way around over southern seas in winter time. Today this has been remedied. It was Brigadier General Lawrence G. Fritz, A.T.C., who first proved, by flying a specially equipped Liberator into the worst weather fronts of this northland, that con-



By Martin Sheridan

Why is Greenland of vital importance to us? Martin Sheridan, an accredited Navy War Correspondent, went up to see.

stant weather reconnaissance here could be made practical. Today he is Chief of the North Atlantic Division of A.T.C., and daily weather flights in this area are maintained as a matter of routine. The reports for the area covered by American planes are made complete for the whole Atlantic crossing when combined with reports from British planes doing reconnaissance from British bases.

To serve with an Air Force weather detachment on the east coast, or on the great ice cap that covers 85 per cent of Greenland, is the most isolated Army work possible. Every man is a volunteer especially

chosen for his adaptability to complete isolation, for his qualities of initiative, and for his physical condition. The medicos prefer men who already have had appendectomies, because the small groups do not have doctors, and it is difficult to bring in one in winter.

"Everyone has been picked so carefully," explained Major Robert B. Sykes, Jr., district weather control officer for the entire island, "that we've never had a serious personnel problem. And many isolated groups consist entirely of a few enlisted men with only a sergeant in charge."

Major Sykes arrived with the original task forces in the summer of 1941 and planned much of the weather program. His men live in prefabricated wooden buildings whose roofs have been trussed and strengthened with guys.

Some stations are isolated for 10 months each year. Pack ice sweeps down the coast and bottles up the fjords as early as October. Bergs longer than city blocks combine with old ice and new winter ice to bar even the most powerful Coast Guard ice breakers. Late in July or August, when the ice finally breaks up, new groups of men and supplies for the year are brought in.

Coast Guard and Army planes drop mail to the lonely weather detachments when-

ever conditions are favorable. One time a bomb bay was loaded with such peaceful goods as packages of frozen beef, vegetables, strawberries and sacks of mail, and dropped them by parachute. The weather men recovered everything dropped. Two days later they radioed that one man in their group had broken out with a rash thought to be scarlet fever.

The group had not had personal contact with the outside world for five months. Hence the base surgeon decided that the condition was caused by strawberries. He advised the detachment not to worry and to sit tight. A later message from the outpost confirmed his deduction.

THE first sea arm to operate in Greenland waters was the Greenland Patrol, inaugurated in 1941 by Coast Guard Admiral Ed "Iceberg" Smith to convoy men and supplies to our new bases and to combat Nazi subs. Today military control of all the bases rests with the Army, while the Greenland Patrol under Coast Guard command provides ships for special Army missions, for escort work, for cooperation with the Greenland Administration and our own consular service.

Attached to the Patrol is a squadron of Navy-owned, Coast Guard-manned PBY-Catalina planes. These provide air coverage for convoys, conduct anti-submarine patrols, deliver mail to outposts, search for fliers and ships in distress, and report on ice conditions at sea.

Unpredictable weather with sudden changes, hazardous icing conditions and the rugged terrain are the greatest hazards of flying in Greenland.

Stocky, jovial Commander D. D. MacDiarmid, USCG, of Clifton, Mass., the squadron commander, says the PBY squadron flies only in daylight. This, the skipper explains, is to preclude accidents among the jagged peaks surrounding the field. "And before we take off on a routine flight," he went on, "we must be certain of being able to land again right here because the alternate strips are hundreds of miles distant, and an emergency landing in Greenland is a crash landing — with the emphasis on the crash."

These amphibian Catalinas carry crews of two officers and seven men. They are berthed and repaired outdoors, lashed to steel runway matting in all kinds of

weather — snow, 30 below zero temperatures and strong winds. When the winds zip down from the ice cap in gusts ranging from 85 to 150 miles an hour, crewmen anchor the PBYs to loaded gasoline trucks and tractors. "Last year three planes were ripped apart by the winds," Commander MacDiarmid said. "But we haven't had any damage this year," and here he rapped his knuckles on his desk.

Gasoline pre-heaters thaw out the plane engines an hour or two before the scheduled take-off. These pre-heaters must be pre-heated themselves before their gasoline engines will operate. By leading a canvas duct from the pre-heater to a cover over the engine cowl, and also into the cabin, ground crews have been able to get the PBYs in the air in any Arctic temperature.

Although the planes have gasoline heaters in the cabin and cockpit, the inside temperature often averages from zero to 15 below during winter flights. Everyone wears two suits of 100 per cent wool underwear, two pairs of light socks plus one pair of heavy woolen socks, pile-lined trousers, a woolen shirt, one or two sweaters, a fleece-lined jacket, fleece-lined helmet, fleece-lined gloves, fleece-lined flying boots and a fleece-lined winter flying suit. Even Frank Sinatra would resemble a broad-shouldered giant in those clothes. Dressed for winter flying, the pilot has difficulty in squeezing into his seat and usually ends a day-long patrol completely chilled and with icy feet.

Flying in Greenland, the incubator of North Atlantic weather, the rugged PBYs can ice-up to the danger point in a matter of minutes. Pilots attempt to stay out of the clouds as much as possible. But frequently they encounter icing on the wings and fuselage when the atmosphere is per-

fectly clear with no visible moisture present.

Sitting in the comfort of Commodore Rose's dining room, Commander MacDiarmid told me about his crossing of Davis Strait on the previous day with a full crew and cargo of mail. His PBY began to ice up so quickly that he was barely able to keep it 200 feet above the turbulent 30-degree water, though using maximum engine revolutions.

"None of us was particularly happy about our plight," the skipper grinned. "For landings in Arctic waters are disastrous, heavy ice forming instantaneously on the hull. There wasn't a thing we could do. The plane continued to settle lower and lower until our antenna was dragging through the slush ice. Fortunately for us, however, we hit a slightly warmer air current and the deadly ice began to slough off."

Had the crew been faced with a possible crash-landing on the Greenland coast or the ice-cap, instead of the sea, they would not have felt so concerned. For then they would have been bait for the Army Air Force's crack 1st Arctic Search and Rescue Squadron, unofficially known as "The Find'em and Feed'em Boys." The Squadron's record of rescues is so far perfect — every flier who has survived an emergency landing on the ice has been brought out alive.

Meanwhile, the Squadron's air echelon will locate the grounded men and then drop colored parachutes with kits including radios, stoves, axes, clothing, rations, sunglasses and other articles necessary for survival.

Coming back from Greenland, you bring not only the memory of brave men, but the conviction that you have seen a new Arctic history in the making.

The author, at right, talking with Commodore Earl G. Rose, USCG, the Commanding Officer.

U.S. Navy Photo





UNTIL WE GET TO BERLIN

By
Colonel Robert R. Gideon

From this point on, ground forces carry the brunt of the war; tactical bombing is of paramount importance.

I AM not a literary man, so I can spin you no epic tales about the war. This is just the talk of a professional soldier to neighbors at home.

When I was graduated from West Point in 1939, many did not think too much of professional soldiers. When I went into the air forces in '41, many did not think much about the usefulness of air power. That seems changed now. War has educated us.

When I got home from the European front in December and the news of Germany's great counter attack began breaking, some of my countrymen seemed in real despair. I can only say this — the German strategy will prolong the war, which is just what the Germans want. It will magnify the war's cost to us. We shall not win cheaply, as some Americans had hoped. But — we shall still win.

The setbacks we suffered at the end of 1944 mean primarily that we shall have to do some of our work over again.

The work of our air forces in the year

previous to December headed up to three strategic accomplishments.

For one thing, we mastered the Luftwaffe; by April last year our 8th and 15th air forces had flattened many of the enemy's aircraft plants, and reduced fighter opposition. In my own outfit, the 15th, Liberators have played a great part.

One outcome was that our ground forces could invade the continent in June without being decimated from the air — the first successful invasion across the Channel in history. German prisoners of war would tell us, "When we were in Russia they said our planes were in the west. Here they told us our planes were over Russia."

Second, we carried on the campaign heralded by the famous Liberator raid on Ploesti. We bombed the enemy's rich oil resources in Rumania and Poland.

Result: the Germans promptly faced fuel shortages for a mechanized war — shortages which have not prevented their counter-attack, but have certainly handicapped them.

We also bombed plants making hydrogen peroxide. This, combined with potassium permanganate, is one of the fuels for the German robot bombs.

Finally, we hit hard at enemy lines of communication. As our own ground forces moved toward Germany, we have tried to hinder German supplies. For instance, in one day near the year end — on December 11 — we poured 6,000 tons of bombs on German railway centers. The Fifteenth Air Force flew up from out of Italy, and the Eighth out of Britain. They put some 1,600 of our heavy bombers in the air over Germany on one day. With fighter escort, that meant a flying army of more than

Left: Liberators flying under fighter cover of P-38's on strategic bombing mission to destroy Germany's oil resources in Poland.

17,000 Americans in the air over Germany at one time.

Here are official AAF figures on the tonnage of bombs dropped on some of the greatest German centers in the period between December 7, 1941, and December 7, 1944:

CITY	TARGET	TONNAGE
BERLIN	general war supplies, traffic center	13,717 tons
PLOESTI	oil	13,098 tons
MUNICH	aircraft, chemicals	12,937 tons
VIENNA	general war supplies, traffic center	11,671 tons
MERSEBERG	synthetic oil	11,391 tons
COLOGNE	general war industries, traffic center	11,236 tons
HAMM	traffic, supply, power center	10,105 tons
BRUNSWICK	aircraft plants, steel works, etc.	9,431 tons
KASSEL	aircraft plants, locomotives, marshalling yards	8,656 tons
HAMBURG	oil, shipbuilding, aircraft	8,481 tons
LUDWIGSHAVEN	chemical, engineering, AFV, etc.	8,264 tons
KIEL	principal German naval base, etc.	7,662 tons
BUDAPEST	aircraft, supply, traffic center	7,007 tons
FRANKFURT	aircraft, motor vehicles, chemicals, etc.	6,642 tons
SAARBRUCKEN	coal fields, iron and steel supplies	6,476 tons
MUENSTER	industries, inland harbor, canals	4,741 tons
HANOVER	rubber, ordnance, oil refineries	4,697 tons
BUCHAREST	supply center Eastern front	4,403 tons
OSNABRUCK	iron, steel mills, railroad junction	4,357 tons
WILHELMSHAVEN	naval base, U-boat pen, etc.	4,130 tons

All this represents what we call *strategic* bombing. You doubtless know the distinction: strategy wins wars; tactics wins battles.

From the time of the invasion, our air forces have done more and more tactical bombing in support of our ground troops. Whereas a strategic target may be an aircraft factory or an oil refinery, typical tactical targets are gun positions, bridges close to the front line, troop concentrations, staff headquarters, armored vehicle concentrations, and the like.

During the invasion, for instance, our tactical bombing was done on precise schedule. We would have fifteen minutes to bomb an exact target; then our ground forces would move in as we stopped. We would "take turns." Heavy bombers like the Liberators would knock out whole areas

of approaches, from great heights. Then medium bombers would take over at medium altitudes. Then the fighters would move in, strafing and dive-bombing.

Similarly, when the Germans counter attacked at the end of 1944, our air men supported the ground troops by tactical bombing of this same kind, directed against the enemy's movements and positions. Our planes also rushed up ammunition and supplies to our ground troops, often dropping them from the air.

As the war proceeds from here on, tactical bombing will be of paramount importance. For our ground forces will doubtless be carrying the brunt of the attack, and it will be the business of our planes to lend them all support possible.



Liberators of 15th Air Force lined up at airdrome in France to unload cargoes of bombs and gas, ferried there to permit tactical air force to continue pounding Hun troops and positions.

When the day comes — and it will — that we break across the Rhine and burst through the Siegfried line into the heart of Germany, such tactical bombing will doubtless continue to be vital right up to the gates of the enemy's capital.

This is a bad winter in Europe — some say the worst in a hundred years. That weather is one of the breaks that have gone against us. The Germans made their counter attack at a selected time when weather limited the effectiveness of our air power, and the longest nights of the year helped greatly in shielding their operations.

Meanwhile, in heroic measures — such as attempts to rebuild the Luftwaffe by conducting plane construction in underground factories — the Germans have shown the courage of desperation. Their renewed of-

fensive in middle December, during which they brought out new airpower, illustrates this.

The fight is bound to be costly, bloody and — on the enemy's side — merciless. As General H. H. Arnold has said, "I don't think the war in Germany will end until we actually get to Berlin." Perhaps guerrilla warfare will continue even long afterward.

Statistical summaries of bombs dropped cannot picture in any clear way the attack the Germans have been withstanding. What the enemy is experiencing must indeed challenge any average American to imagine.

Yet even this unparalleled attack has still not reached its goal — Unconditional Surrender.

As we continue on to our objective, Americans who feel that the war is a long way off might remember this: it is only an overnight's plane ride. That is, the siege of Germany is no farther off in point of time than was, say, the siege of Vicksburg from Washington some eighty years ago.

I left the war theater, for instance, one Saturday in December, on special assignment, and was in Washington the next morning.

The Christmas lights of my homeland looked good to me. I am not one of those who say our people don't know there's a war on.

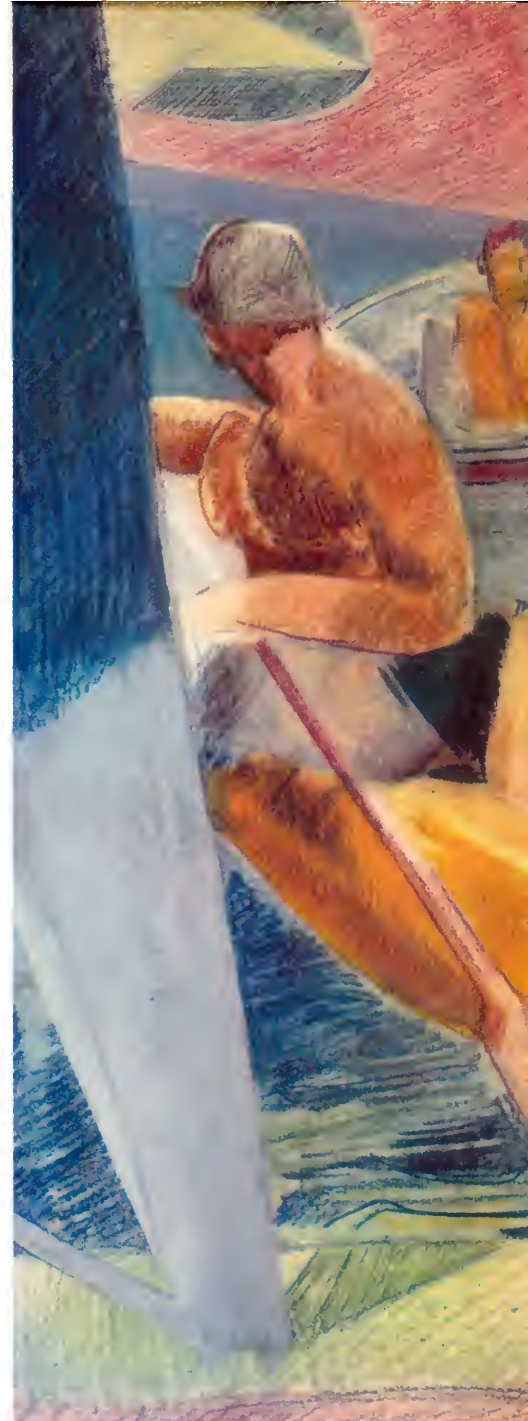
To keep the actual war away from the shores of our homeland — away from our own cities — was one of the first objectives of all our military strategy. So it is good to see our homelights burning.

We Save our AIRMEN

By Capt. John A. De Chant, USMC



Above: Riggers and packers in the parachute loft of the South Pacific Combat Air Transport, as painted by Sgt. Paul T. Arlt, USMC.



AMERICA is a pilot-crazy nation . . . in a very savvy way.

No other nation at war has devoted such painstaking effort to solving the innumerable problems of pilot-safety in all the theaters of this global war. Our humane concern for the lives and safety of our combat pilots and aircrewmembers has paid off lavishly, not only in the thousands of lives saved but, almost paradoxically, in sparking up the natural audacity of our airmen in combat.

There was a time, early in the war, when pilots were high on the list of expendables. They fought with what little they had against vicious odds. In the high tradition of the services, many individual pilots sacrificed themselves deliberately to save a greater number of men.

An immortal hero in naval aviation is the lieutenant who was returning to his carrier after hitting the enemy in the Central Pacific. Long after dusk he was still on a course that would bring him down aboard his ship. Then he noticed a flight of Japanese torpedo bombers which were using his plane as a homing pigeon, to lead them through the dark to the carrier. Radioing his situation, the Navy pilot ignored his almost empty fuel tanks. With a quiet goodbye, he turned his plane away toward the open sea . . . and certain death. The Japs followed, and never found our task force.

That happened less than a year ago. It

was a military necessity then. A carrier could not be spared in those crucial days.

Witness the sharp contrast between that and what Admiral Mitscher did in the recent battle of the Eastern Philippines.

During the bitter sea fight, more than two hundred planes were still over their targets at dusk. They stayed until they had finished their jobs. To those brave pilots, the problem of finding their blacked-out carriers was secondary. Admiral Mitscher felt otherwise.

In spite of the possible presence of enemy submarines and the imminent danger of attack from scores of Jap land-based torpedo planes, the Admiral thumbed his nose at the menace. He had to save those airmen. By his order, the carriers in the area lit all their deck lights, used star shells.



Above: Capt. G. M. Harding, USMC, shows a Catalina in the Pacific rescuing a stricken airman.



and flooded the inky skies with searchlights to beacon in the pilots. Gas shortage forced many pilots to land on other carriers than their own, overloading the decks. Some cracked up, holding up those still in the air.

The situation was met again. The deck handlers were ordered to push plane after plane over the side to make room for those who had to land. The many pilots who landed in the water were picked up by destroyers that swept the seas with searchlights until they found the survivors. For those missed that night, the task force returned to the danger spot the next day.

Is it any wonder that the carrier airmen

Left: Sgt. Paul T. Arlt, USMC, paints the workers in the Flotation Gear Shop, where life rafts and Mae West life belts are always kept in condition for the water landings that are an ever-present Pacific hazard to airmen.

swear they'll fly into the mouth of hell for that pilot-crazy Admiral?

That is only one incident in the full story of pilot-safety and sea-air rescue services that the armed forces carry out daily.

The air services from the first have insisted that pilot-safety predominate in building combat planes, and that these planes, in addition, must equal or better those of the enemy in performance. This safety requirement complicated production, and made the planes less maneuverable than the Zero. But it has paid off in statistics.

Nor have we relied for safety on mechanical improvements. The personal training and gear which we give our pilots and crewmen are just as important. They have been incessantly drilled in the art of ditching their planes. Ingenious rafts of all sizes are accessibly stored aboard all planes. The fighter pilots carry theirs on their backs. With the rafts go even more ingenious gadgets that help the airmen return from enemy territory or hidden sealanes in good health.

The triptych of safe return that the fighter pilot carries on his own back are the parachute, jungle kit and life raft. Totalling the three of them, the pilot who bails out has more than 60 items to use

for his personal health and safety. They run the gamut — tricky signal mirrors, canned water, food, flares, water dyes, fishhooks, medical supplies, and paddles. Add to all this his personal armament of pistol and knife — and the pilot is good for many moons at sea or in enemy-held jungle.

Staff Sergeant Bill Coffeen, USMC, used all that God and the Marine Corps gave him after he bailed out of his fighter plane deep in enemy territory in the Central Solomons. It took him 72 days, but he got back.

Sharks and Zeros to the contrary, Mike Vorachek, turret gunner in a Marine torpedo bomber, lived eleven days in his raft within paddling distance of Jap-held New Britain before he was filched from the sea by a Dumbo mission. But his experience was not nearly as terrifying as the eight days that Lieutenant David Scott spent in his one-man raft just outside the bustling Jap harbor at Rabaul, the biggest enemy base in the South Pacific. After his nightmare of numerous inspections by Jap planes and frequent fist fights with sharks, Scott, too, was rescued by Dumbo and brought back to safety.

The Dumbo rescue missions, usually flown in the "Ruptured Duck" — as some

pilots call the Catalina PBY — have been rightfully called the airman's biggest morale builder in the Pacific. These planes have saved at least 1,400 men from death or a Jap prison camp in the Solomon Islands alone.

Nowadays the mad-hatter Dumbo pilots no longer sit at a rear base waiting for a rescue call. They fly right along with the fighters and bombers on their missions. Airborne, just a few miles from the target area, they wait a call from flak victims. Then, using their fighter cover to batten down Jap hatches, the fabulous Dumbos go clucking into the hot spot to pick up their loads.

Each day brings some new device into action to play its part in this shrewd and humane American mania — to save pilots. It may be a bomber dropping a huge "mercy" boat into the roaring North Atlantic, or a casual helicopter lowering its ladder to a weary man in a yellow life jacket.

Has all this emphasis on pilot-safety and rescue work softened up the combat airman? Has it pampered him or made him over-cautious? Hell no! He'd go out against the enemy whether it was there or not. But with it on his side, he fights like a man with two hearts — his own . . . and his country's.

Life in a life raft is cramped, but airmen who must endure it find many ingenious devices for living, and rescue is usually a natural sequence.

U. S. Navy Photo



FIRE OVER BURMA

(by Mail from India)

AAF Photo

"NAVIGATOR to Pilot . . . Number 3 engine is smoking . . . Number 2 is on fire . . . Number 4 is losing oil rapidly . . . Number 1 seems to be acting up also . . ."

Below, the jungles and mountains of enemy-held Burma were visible at infrequent intervals through the overcast monsoon sky. The crew of the B-24 heavy bomber, "Lost Angel," of the Tenth Air Force of the Eastern Air Command, were in a tough spot.

Chances of survival in a bail-out over this region are slim. It was up to the skill of the pilot and the stamina of the plane to get the crew back to safety. They did it. Later, the pilot got the DFC. There are no medals for a plane.

The engines on this B-24 had reached the 600-hour mark. That is an excellent performance anywhere. This was the last run for the engines before replacement.

The mission was routine. The officers were veterans. Pilot Lt. Charles J. Mueth had already amassed 1600 hours on B-24s. He holds the Air Medal and DFC plus an Oak Leaf Cluster for each of his eight months of combat in India. Co-pilot Lt. Daniel J. Michael had received the Air Medal. So had Lt. Arthur C. Eldridge, the bombardier. Lt. Robert C. Alby, the navigator, had won the Purple Heart in addition to the DFC and a Cluster to the Air Medal.

Their take-off had been made easily, and gave no hint of the trouble which developed later. The big bomber pointed its nose

One engine burning—three others faltering — and almost certain death beneath in Jap-infested jungles.

through the thick monsoon weather and headed for Central Burma. En route, it climbed steadily to an altitude of 13,000 feet, then levelled off between two strata of clouds.

Two hours later, the Liberator swung over the enemy lines. Gunners Ray Morgart, Ray Walsh, Jr., and Vernon Kastle, were at their stations, alert for possible interception.

Without warning, one of the overworked engines began to falter. The added strain was too much for the others. Almost simultaneously, all the engines began to fail. Alby calmly called the pilot: "Navigator to Pilot . . . Number 2 is on fire." The B-24 began to vibrate violently from the uneven beat of the engines. Mueth pushed the alarm bell. The crew struggled into their parachutes.

Mueth feathered the prop on Number 2 engine as it burned — and the fire died out slowly. Rapid adjustments were made on the remaining three. One by one they picked up the cadence. The vibration ceased, and the three engines got down to business.

Mueth's voice came over the inter-phone:

"If I hit the alarm bell again, jump. I'll be too busy for any other signal."

Carefully, he brought the plane around and headed for home. He had already lost about 5000 feet. But now the B-24 maintained altitude with the three engines going. They required careful nursing. From time to time, one after another would give indications of trouble. All were losing oil. The sides and rudders of the plane were oil-drenched. Yet the sturdy ship by now was back over friendly territory, and within a half-hour of its base.

The strain was too much for Number 4. The vibration began again. Mueth had to feather its prop. So now they rode on two engines only. But the B-24 still flew on steadily. Alby spoke into the inter-phone.

"What a plane . . . I didn't know one would stay in the air at this speed."

Slowly the field came into view. With infinite care, Mueth maneuvered the plane in for the landing. Wheels came down. The hydraulic system worked.

"We'll play safe. Prepare for a crash landing," Mueth told the crew.

With the remaining engines throttled back, the aircraft came in quietly.

Mueth's citation, accompanying the DFC awarded to him for his part in bringing the aircraft and crew back, read in part: ". . . for extraordinary achievement while participating in aerial flight. He was entirely responsible for saving the aircraft and lives of his fellow crew members."

No medal for a plane . . . But Mueth's first act on getting out of the B-24 was to go forward and pat it on its blunt nose.



Above: Hardworking townsfolk of Redmond take a breather from their job of brush-clearing for runways at the CAP Airpark.

HOW WE GOT OUR AIRPARK

By Mary E. Brown, 2nd Lieut. CAP

IT happened in just seven hours on Sunday, August 27 — the transformation of sagebrush flats five miles west of Redmond, Oregon, into a going airpark, with runways that were used by a plane the same day construction was started. Two months later, Redmond's Civil Air Patrol Airpark had a hangar large enough for three planes, and had received official designation from the Civil Aeronautics Administration.

It was like a magic carpet unrolling at unbelievable speed. Some 30 members of Redmond's CAP squadron and their willing helpers did the job. They arrived early in the morning with mechanical equipment borrowed from the Redmond army air field, the city of Redmond, and businessmen and farmers. Besides the heavy machines there were quantities of pitchforks, grubbing hoes and shovels—all in hands eager to man them.

By nine o'clock graders were humming up and down the flats; a bulldozer was flattening trees. A rake and leveler criss-

crossed the runways. Trucks hauled away sagebrush as pitchforks and grubbing hoes flew back and forth under the broiling August sun.

By late afternoon the runways, one 1900 feet long and the other 1200 (since extended to 2400 feet), were usable. At least, they looked good enough to Lt. Walter Howard, commander of the CAP squadron in the nearby town of Bend. At four o'clock he made the first landing on the north-south runway.

The reception committee threw down its picks and shovels, and Lt. Maurice F. Roberts, commander of the Redmond squadron, Dick Ballantine, flight instructor and now manager of the field, and other CAP members welcomed the first pilot to land on Redmond's brand-new airpark.

It all looked like a miracle of speed. Actually, it wasn't quite that fast. First, the idea had to germinate. For the last dozen years or so, Redmond folks have taken the



Above: Even women members of the Redmond CAP pitched in. Here four of them are carpentering on the Airpark's new hangar.

lead in developing Central Oregon's aviation. The clear, dry climate yields 349 flying days per year and makes the locality ideal for year-around flying.

But the town's citizens have had no airport during the war. Construction of a Class 4 municipal airport was begun by the WPA in January, 1942, and the field was extended by the army. When the army air forces took over, the city retained ownership un-

der the terms of its lease with the government. But the huge base, with its paved runways, taxiways, parking aprons and operational facilities, will not be available for civilian use until after the war.

Making Roberts Field a military base for the duration didn't cause Redmond citizens to give up flying for the duration. There was a spot near Cline Falls on the Deschutes River that was already quite level and fairly clear of trees, because it had been part of a big ranch. Air-minded citizens had frequently eyed this as a good location for a landing field. Several CAP members began taking flight instruction, and the idea developed: why not build a field at Cline Falls for use until such time as the army returns Roberts Field to the city? And, besides, isn't there often a need for smaller auxiliary fields near large ones, for the use of private pilots and their "pud- • dle-jumpers?"

So came the decision to build an air-

Allen and commissions of the County.

And so, with 80 acres of land on their hands, the CAP members began to consider how to get two runways built. There was the engineering detail of staking out the runways and getting them in line with the prevailing winds — and this had to be done just right. Ballantine's knowledge as a pilot was combined with the skill of Forrest Cooper, resident state highway engineer, to do the job.

Next was the detail of equipment. The personnel of Redmond army air field offered to cooperate with the CAP, as an auxiliary of the army air forces, and the base sent a large grader and a bulldozer to help build the runways. The city of Redmond helped by sending out its blade. A dentist who operates a nearby farm as a

day, the CAP held a second field day to smooth out and sprinkle the strips, using road sprinklers loaned by Deschutes County and the city of Redmond. On a succeeding Sunday the air field grader again was used, and this time the length of the north-south runway was doubled, making it 2400 feet.

Redmond Flying Club was now organized and had purchased an airplane. But before construction of a hangar could begin, application had to be made to the Civil Aeronautics Administration for permanent designation of the field. Detailed maps of the field were drawn for submission to the CAA, and about October 1 the word came that the designation had been granted by Washington.

Then the flying club and Ballantine got busy with plans for their hangar. It was decided to construct a building 28 by 80 feet in size, large enough for three planes.

Materials were obtained wherever they could be found. They included part of the old hangar which had stood at Roberts Field before it became a military base. Poles that had been set up during army maneuvers in Central Oregon last year were bought at a low price. Other used lumber was secured. The hangar was laid out and started last October 15.

Every member of the flying club turned out with hammers and saws October 22, and with the help of a number of non-flying CAP members, the hangar sprang up.

While the airpark has been constructed primarily as a stop-gap while the Army occupies the city's Class 4 airport, it offers many distinct advantages of its own. CAP members are beginning to think of it as a possibly permanent installation — a "jalopy" field, so to speak, for smaller, privately-owned aircraft and for the training of student pilots.

The idea is comparatively new, but it is taking hold in lots of places. Many metropolitan centers are arranging now for their post-war airstrips and airparks, where pilots may land their planes conveniently close to destinations without getting mixed up in heavy air traffic.

Perhaps Redmond will find its CAP airpark is still needed even when the town's big municipal field is again available. The project has proved one thing — any town that needs an airport or airpark can have it, if the citizens will all pitch in.

Is your town getting ready for the air age?

If you are going to enjoy personal flying post-war, you'll want an airpark near at home. Manufacturers are already planning the planes for you—see, for instance, the new Stinson Voyager shown on Page 28. But not all towns make it easy for citizens to fly.

Here is how a town in Oregon built its own airpark for small planes at almost no expense at all. It is one of 81 such projects built by CAP members in 22 states, and more are on the way. If you want added information on building airports, airparks, and flightstrips, write for a booklet to the Aeronautical Chamber of Commerce, Room 3324, Empire State Building, New York 1, N. Y.

hobby loaned his tractor, and drove it himself. A land leveler and quack grass machine was loaned by the president of the Redmond Flying Club. A dairyman who lives near Cline Falls sent his rake, which was used to pick up sagebrush. Trucks owned by CAP members and their friends were used to haul away brush.

Aiding the grown-ups, a group of small boys did valiant duty, while one citizen served hot coffee, and others supplied cold drinks.

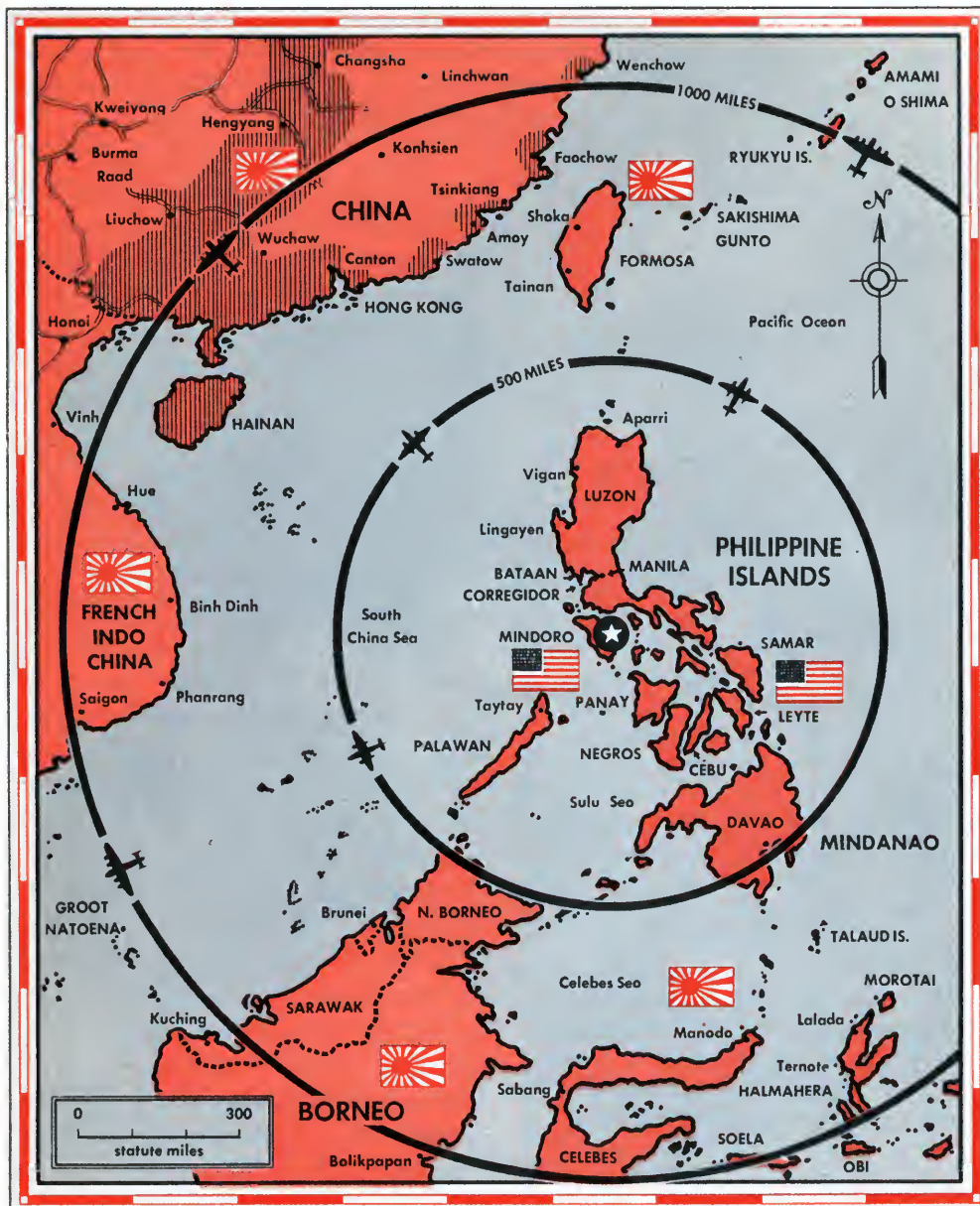
WHILE one Sunday's work made the runways suitable for landing, much still remained to be done. On the following Sun-

park. First was the matter of land. Here began the help that made the field possible. Redmond-Sisters Sportsmen's club owned 40 acres of the site selected. War had taken away their shells, and the trapgrounds were not being used. The sportsmen were eager to cooperate. "If we can't launch clay pigeons, maybe we can help put a few planes into the air," they said.

Right to use an additional 40 acres was obtained from the Deschutes County court, through the cooperation of Judge C. L.



COMING TO GRIPS WITH THE JAPS



This fiery picture comes via airmail from the 13th Air Force in the Pacific, to show a Liberator strike against a major Jap fuel supply. The scene is in the skies over Balikpapan, on Borneo, where some 33 per cent of Japan's oil resources are located. (You will find Balikpapan at the bottom of the inserted map.) The huge smoke columns are rising from the Liberators' direct hits on the Pandansari oil refinery and a paraffin refining base near-by.

Such strategic bombing of Japan's vital resources heralds — just three years after Pearl Harbor — a long-distance striking power no nation has ever possessed before. At long last we are coming to grips with the sprawling empire which the Japs thought barricaded by distance. Last year we made extraordinary progress in obtaining air bases for this purpose. By winning the island of Saipan (to the east of the region mapped here) we secured a base that permits us to fire Tokyo itself with our super bombers. Through MacArthur's skillful recapture of key bases in the Philippines, we start off 1945 with other air fields that will permit us to bomb the Japs wherever they have accumulated their strength for war.

Supplies are still a problem. Early in January, 1945, it was announced that Liberators are being used as aerial fuel tankers to deliver gas to Far East bases where super bombers take off for Japan. Modified to make a fuel tanker, the Liberator is called the C-109; it carries several thousand gallons in specially designed tanks in the nose, wings, bomb-bay, and fuselage. This gas supply, on which it can draw in flight, gives the C-109 the longest flying range of any airplane in the world. In just two and a half months in 1944 Liberators flew more than two million gallons of gas over the Hump from India to our Chinese bases.





AAF Photo

Above you see three of the five, with *Seventh Heaven* in the foreground, at 7th AAF Headquarters.

5 old faithfuls

By SGT. WILLIAM CUNNINGHAM

By Air Mail from the Seventh Air Force

THIS is about five old Liberators in the Pacific.

The Pacific is a Liberator ocean. Liberators have been flying its wastes, daring its threats, pounding its Jap installations, almost from the start of our airwar there. No other heavy bomber has been seen there in such numbers.

But these particular five planes I want to tell you about here are something very special, even among Liberators. They are history still alive and on the wing. Together they have flown some 1,850,000 miles —

they are the oldest planes still flying in the Pacific theater.

These are the ships that really started the Liberators' Pacific reputation. It was in the summer of 1942 that Liberators began coming into the Central Pacific in any number. Since then hundreds have flown through the Hawaiian Islands on their way to the Southwest Pacific where they helped stem the Jap tide. Many others have stayed with the 7th AAF in the Central Pacific, to spearhead the drives which moved 7th AAF bases 3,600 miles to the west through

the Gilberts and Marshalls to the Marianas — bases which put the Liberators in easy striking distance of the Carolines and the Bonins.

These five veterans were among six Liberators which preceded the rush by more than six months. They were LB-30s, a version of the Liberator originally made for the RAF. They arrived early in February of 1942.

The history of the very first Liberator in Hawaii was brief. It arrived December 4, 1941. Four days later, in the Jap attack on Pearl Harbor, it was practically the first thing the Japs hit when they bombed Hickam Field. It was blown to pieces.

Six more arrived two months later to receive a kindly welcome. But these were not regarded as suitable for combat because of previous British use. Hence they were turned over to the 7th AAF's Southern Cross Airways as long-range cargo ships, stripped of guns and bomb racks and fur-

nished with extra gas tanks for long hauls.

Five of these six still function. One was lost on a flight to Midway in June of 1942, when the Navy and the 7th AAF met the Jap task forces headed for Midway. The surviving five, serving as cargo ships, became an integral part of the rather unusual organization known as S.C.A.

The name of the Southern Cross Airways was suggested by the late Major-General Clarence L. Tinker, former commanding general of the 7th AAF, who lost his life in the final stages of the Battle of Midway. General Tinker was instrumental in providing the planes for the line, which he named for the famous pioneering plane of Kingsford Smith, first to fly the route from Hawaii to Australia in 1928. The new airline used the same route, to hook Hawaii with the advanced bases of the 7th AAF.

When the first of the four-engined bombers was assigned to the squadron there was a certain amount of consternation among the ground crews.

"Not one mechanic in the squadron knew anything about maintaining a four-engined plane when we got our first LB-30," Master Sergeant Douglas O. Anderson, Lawrence, Kansas, recalls. Anderson is line chief and has been with the squadron since its beginning.

"We had neither spare parts nor tech orders for the planes. So our efforts at maintenance were sort of a hit and miss proposition for a while. But the mechanics soon learned by working on them. You might say that the planes were so well put together that they were able to go for a while without too much maintenance. They flew anyhow."

Fortunately for the squadron, its cargoes and the planes, tech orders were forthcoming shortly. And, as more Liberators started arriving in Hawaii, the spare part problem was solved before there was any serious need for new parts.

The first LB-30 was named *Old Faithful* because, as the crew members said, "She always got 'em there and she always brought 'em back."

Old Faithful was General Tinker's favorite plane. He used her on one of the first extended flights to the islands south of the Hawaiian group. She was the first airplane to fly the route from Oahu south to Christmas Island, then to Penrhyn, to Aitutaki in

the Cook Islands and to Tongatapu in the Tonga Islands. She was the first airplane of any kind to set a wheel on the landing strips at Penrhyn and Aitutaki. The event was properly acclaimed locally at each island — although the existence of such bases was not advertised too greatly at the time, because of Japanese interest in our military routes. This route to Australia was later used by the Air Transport Command



Major General Willis H. Hale, who made old *Seventh Heaven* the flagship of the 7th AAF.

when it moved into the Central Pacific.

With two other LB-30s, *Fast Freight* and *Trader Horn*, *Old Faithful* escorted a squadron of P-40 fighters from Kauai in the Hawaiian group to Midway, a distance of 1,155 miles, to relieve another squadron stationed there. The following day the three big planes escorted the relieved unit back to Kauai.

The trip was the longest over-water hop ever attempted by P-40s, and was the first of numerous similar tasks which the Southern Cross Airways has undertaken. The Liberators, as larger planes, had the duty of providing navigation, and of standing by in case any of the fighters were forced down.

As the 7th AAF reached out to establish bases closer to the Japs, the bases needed P-40s and P-39s to protect them. The fighters were piloted to them by the LB-30s.

Old Faithful became the 7th AAF flag plane after Major General Willis H. Hale succeeded General Tinker as commanding general. Her name was then changed to *Seventh Heaven*. So today one can just as well lend *Old Faithful* as a family name to all five ships of her vintage. *Seventh Heaven* was the first of the Southern Cross Airway planes to have her olive drab paint removed. She enjoyed the distinction of flying in bare and shiny duralumin for

nearly a year before all the other AAF planes shed their paint.

With General Hale the plane set two records for speed. One was her trip to Washington from the Hawaiian Islands in 22 hours and 25 minutes of flying time for the 4,845 miles. Her first flight from the Hawaiian Islands to the 7th AAF's advanced base in the Marshalls, a distance of 2,400 miles, made another record of 11 hours and 30 minutes.

WHEN General Hale became commander of all land-based aircraft in the forward area of the Central Pacific, *Trader Horn* took the place of *Seventh Heaven*, and was rechristened *ComAirFwd*. Old *ComAirFwd* was the first Southern Cross Airways plane to land on Saipan after the capture of the airfield there from the Japanese. At that time it was carrying General Hale on a tour of inspection. Saipan is the airbase which has done so much to make routine bombing of Japan possible.

As *Trader Horn*, the plane established a record for carrying one of the strangest cargoes of high priority material reported in our air war. It was 5,000 pounds of wheat, brought from the mainland to Hawaii for use by the Hawaiian Air Depot in a sand-blasting process to clean light metal parts.

Among the first planes to land on the airstrip at Penrhyn Island, northwest of the Society Islands, was *Fast Freight*. With another LB-30, *Flight Chief*, she once escorted a flight of night fighters from the Hawaiian Islands to New Guinea. *Fast Freight* is now called *Samoa*.

Flight Chief can boast of being the only heavy bomber in the Pacific with credit for sinking a Nazi submarine. She still has a submarine painted on her nose. The sinking occurred when the plane was used on patrol duty off the coast of Florida before being sent to the Central Pacific.

Flight Chief also was the pathfinder plane for the Air Transport Command. Brigadier General W. O. Ryan, commanding general of ATC's Pacific Wing, used her to travel with his staff on a tour of inspection of bases en route to Sydney, Australia, from the Hawaiian Islands. That route is now a regular run for ATC planes.

The *Chief* has survived some bad wounds. One night last January, for instance, the *Chief* was at Tarawa in the Gilberts when

the Japs staged a bombing raid. Shrapnel put 78 holes in her, and severed two control cables and a hydraulic line. Starting immediately after the attack, the crew of the ship made necessary repairs and got her off to Hawaii on schedule.

From March to October, 1943, the *Chief* was dear to the hearts of 7th AAF personnel because of her *Sun Valley Run*, the name given a semi-monthly shuttle run between the islands and the mainland. Through these runs, men who could get 15-day furloughs were placed on an equal footing with men on the West Coast, as far as starting the furloughs was concerned. Today the plane's name has been changed to *Australia*.

The fifth of the LB-30s still flying is known as the *Gremlins' Work Shop*, so named because she has been the hard-luck ship of the outfit, and has given her crews a variety of troubles.

Latest adventure of *Gremlins' Work Shop* was with Lieut. Col. Stephen J. Rosetta at the controls. The Colonel is now operator of Southern Cross Airways, and commander of the troop carrier squadron. Headed from Hamilton Field near San Francisco to Hawaii, engine trouble forced him to turn back on three engines when he was five hours from the coast. Two hours away a third engine, which had been almost due for a change, cut out.

Approaching the San Francisco Bay area, the Colonel found he was flying almost level with the Golden Gate Bridge. He faced an appalling dilemma. If he flew under the bridge he might not be able to regain sufficient altitude to get into Hamilton Field. If he tried to fly over the bridge the added strain on the two remaining engines might cause one of them to burn out.

He elected to coax the limping plane over the bridge and succeeded in doing so.

With an eye to the future, Southern Cross Airways is now training and planning for the time when its planes will be carrying priority freight and personnel beyond the Marianas — eventually, perhaps, to Tokyo.

There will be newer planes, possibly better planes, on the Southern Cross Airways then. But the chances are still pretty good that the new comers will occasionally pass one of the five *Old Faithfuls* still making their rounds.



BRITISH USE A ONE-TAILED LIBERATOR

PICTURED above is the *Commando*, a Liberator in service on Great Britain's new trans-Pacific route that spans over half the world between Montreal and Australia.

It is the same *Commando* that was once used by Prime Minister Winston Churchill for the extensive globe wandering that was required of him in attending conferences. (See *Plane Talk* for June, 1943.) As his personal plane, the *Commando* visited every major continent on the earth, after first carrying Mr. Churchill to Moscow in 1942.

Now the plane has had a complete overhauling and rebuilding; something has been added, and something taken away. Gone are the Liberator's familiar twin tails; wholly new in Liberator lore is the single tail pictured here, 31 feet high. Seven feet have been added to the ship's length.

The new British military air service operating between Montreal and Sydney, Australia, is said to be the longest single air route in the world.

It makes stops on United States

territory by touching at San Francisco and Honolulu, and runs thence southwest with other stops at Canton Island, Fiji, and Auckland, New Zealand, before reaching Australia.

When the line is in full operation, it will use several Liberators, each capable of carrying 3 tons on long hauls, to cross the Pacific weekly on four-day schedules. Two round trips a week between Australia and New Zealand have also been announced. The *Commando*'s first round trip from Montreal to Sydney and return, made last November with 20 passengers and valuable cargo, was completed in 4 days, 16 hours and 10 minutes of flying time.

This new trans-Pacific service, which is unofficially described as a further indication of Britain's increasing interest in Pacific operations, will connect at Montreal with the daily North Atlantic service to London. Air Commodore Griffith Powell, R.A.F., has the general direction of the new Pacific service from Montreal.

PACKAGING PLANES AND THEIR PARTS

Below: Crates with spare parts for Liberators waiting shipment at Ft. Worth.

FROM a jungle fenced-in field in India, a cargo-laden Liberator drones cloudward and points its nose toward China.

Stacked away, securely wrapped and battened down in the aft quarters of the planes, are materials and machines, spares and equipment on which many lives may depend.

It's the new Pony Express of the skyways, and if its supplies are to be usable when they arrive, they must first be properly packaged.

On small-sized shipments destined for overseas' use, particularly those ranging in weight from five to 25 pounds, a carton-bag-carton type of package has been developed.

The material to be shipped is first encased in a heavy board carton. This is then wrapped in a moisture-impervious bag or envelope which is sealed with tape and placed in another carton of 200 pound minimum-test board.

The final package is air-tight and waterproof.

The size and weight of such items as complete aircraft engines, jeeps and tanks prohibit the use of an inner container.

In these instances, special chemical agents, identical to those used on engines being prepared for overseas shipment by boat, are utilized in and on the power plant.

If size permits, the items are wrapped in a protective covering before being secured into the cargo hatch of the plane.

The exact percentage of aircraft spares and other materials sent by air transport to theaters of operation is a military secret.

Of complete aircraft going into theaters of operation, an estimated 70 per cent are flown to their destinations.

The remaining 30 per cent — those with a fuel capacity that limits their range — are stowed aboard ship for delivery.

In preparing the plane for a journey by ship, its wings and tail assembly are removed and crated. The rest of the airplane is left as it was when it rolled from the assembly line.

All seams and joints of the fuselage are sealed with a hydropscopic, moisture-imper-

vious tape. The entire fuselage is then sprayed with a moisture resisting agent.

The motor receives treatment similar to that received for long-term storage. All parts are completely sealed by spraying, and the power plant is enclosed in a moisture-impervious plastic, paper-type envelope or bag.

In the field and under actual combat conditions, ground crews can reassemble an airplane, thus packed and crated, in less than six hours.

When the plane is to face a long period

of storage overseas, or must be transported from a dock area to a theater of operations, the entire airplane is crated.

The wings, tail assembly and propeller are removed and crated in the same way as for deck shipment of the airplane. The fuselage with its component parts are also housed in one large, wooden crate.

Some of these crates require as much as 6,500 feet of lumber, and are so large that soldiers in war zones have pressed them into service as emergency barracks or small store houses.





THEY SHALL BE COMFORTED

By
Sally MacDougall

ROBERT E. HUDSON left high school in Decatur, Illinois, at 17, and after short spans of training here and in England became Staff Sergeant Hudson, serving as a waist gunner on a B-24 Liberator bomber of the Eighth Air Force over Germany. At 19 he made the return ocean voyage to America in bandages. What happened to him after he was wounded illustrates the care given by the armed services to every American lad wounded by our enemies — whether in Europe or the Far East or the strange isles of the Pacific.

Today the sergeant is a patient in the Army's Mayo General Hospital in Galesburg, Illinois, near his own home. The

This story of what happened to Robert Hudson makes one fact clear: wounded airmen receive superb medical care and attention.

seriously wounded who return to this country are hospitalized as near their family as possible. Thus he could go home to his family for 1944 Christmas dinner. When the family car came for him, the boyish sergeant stepped out of a contrivance in which he is learning to walk again, and was helped into the back seat to spend his first few hours in nearly a year away from hospital life. Out of pajamas and in uniform, he had his tunic brightened with the Distinguished Flying Cross, the Purple Heart,

the Air Medal, the European Theater of Operations with three bronze stars, and the Good Conduct Medal.

Incidents connected with most of these decorations were crowded into one eventful day, last February 21st, when Sergeant Hudson made his seventh and last flight over Germany as a waist gunner in the Liberator called Old Bag O'Bones.

Before this mission, as always, he had taken time to read the 93rd Psalm from a tiny Psalm book he kept fastened to his parachute: "The Lord reigneth. He is clothed with majesty; the Lord is clothed with strength. . ." Hudson says that at his guns in the plane he also used to recite a



AAF Kodachrome

Wounded airmen transported from war zones in Liberators C-87 reach a hospital base.

prayer which another soldier had written:

"God of the evening, God of the dawn . . .
God of the morning, God of the light,
Keep our engines strong in flight.
And then, O Lord, if it is Thy will,
Give us days and nights when we need not kill . . ."

Events of the day of that final flight are etched in the waist gunner's mind. He remembers them in terms of walking—"my last walking"—walking across a field in the chilling mist before sunrise, walking to chow house for breakfast, then walking to operations where the crew got into flying togs and the chaplain said a prayer. Then the crew went to the briefing room for data on the day's raid. They picked up parachutes and walked to the truck that carried them to the stand where Old Bag O'Bones was parked.

"I stood fireguard on the outside of the ship," he says. "We taxied along the narrow

perimeter, awaited our turn for the take-off. We were next. With the ease of a gull, our ship soared into the air."

He waved a hand with a length of red yarn in it as he told this part. In the hospital, he does handicraft work, hooking yarn into canvas to make the bright design of the Eighth Air Force. Such work steadies a man's nerves.

"At the pilot's signal we went to our stations. I helped the bombardier pull pins from bombs and went to my gun position. I still had to put on my equipment. I can't get through the bomb bay door with it on."

He still identifies himself with that Liberator outfit in the present tense.

"Over the channel," he remembered, "the pilot called us individually and asked how things were. Did we feel O.K. and were we all set? As usual, he signed off by saying, 'All right, give 'em hell.' What a pilot he was that day! He is Lt. H. E. Broxton from Birmingham, Alabama.

"Then we were in Germany, nearing our target. It was 40 to 50 below. When our oxygen masks froze, we'd crush the stuff and knock it out. As flak rocked our ship, I saw holes appearing in the fuselage.

"We were making our second run on the target. F.W. 190's swarmed in. The pilot held our plane in formation and executed a 360-degree turn. 'Bomb bay open!' I heard. Then, 'Bombs away!'

"They silenced our No. 1 engine. Number 4 caught fire. The upper turrets, nose and tail turrets were out of commission. Cannon fire. Everybody and his little brother came to get us. Our job had been done. Now we had to get back across that territory of hell.

"Hell kept on popping. In a split second I was hit in both legs. The other waist gunner was covered with hydraulic fluid. Our lines were shot away. We had no oxygen, no interphone. We tried to keep our heads. I pulled the tail gunner out of the tail and sat him on the floor. He looked at me with a strange expression. I asked him where the hurt was. He pointed to his leg.

"We took care of it with what we had and I went back to my gun. My buddy back in the waist was on the floor. He was out. I gave him oxygen. He came to and I gave him morphine. Just then Jerry sent a 20-mm into the ammunition belt. It rebounded to my side. That put me out of commission.

I couldn't move. My body had suddenly frozen from the waist down. I tried to handle the guns again. Then I lay on the floor and I just prayed."

THAT was when Sergeant Hudson realized that the ship was on fire. The wounded tail gunner managed to get to where he was and pulled him from approaching flames. "He kept me from being burned alive. The fire was getting worse. Our part of the ship was very hot.

"The bombardier and nose gunner came, just in the nick of time. They exhausted two fire extinguishers, then used flak suits and mits and even their bare hands, fighting the fire. I asked the bombardier how many engines we had left. He didn't answer. He gave me morphine."

He remembers seeing the engineer and radio man trying to get the bomb bay door shut. He looked out of a small window on the underside of the ship and realized that the ship was rising to avoid trees and houses. "It scared me to see that we were so close to the ground."

Later he learned that while the plane was on fire, the other waist gunner bailed out. "He couldn't have known how low we were. We were so close to the ground his parachute hadn't time to open. That was why one of our crew of ten did not come back that night.

"Our pilot made up his mind that we were going to get home, and get us home he did. A couple of other ships came in at the same time. We had no brakes. To avoid crashing into the tail of another ship, our pilot headed our plane to the center of the field. We came to a halt slinging mud everywhere. The bombardier was holding me so I wouldn't get jarred. I was rolled in blankets."

While the flight surgeon was checking his wounds, he could hear men outside counting the holes in the plane, and wondering how the pilot ever managed to keep her in the air. A body splint was fastened on him. The doctors, crew and pilot eased him through the window.

"It was wonderful to be outside and alive, really outside in the air. Some of the crew gave me the raspberry about how tough it would be to kill me. Then I was lifted into an ambulance and rushed to the hospital on the base. In a few minutes they were cutting off my clothes. In a few hours



N. Y. World-Telegram

Sergeant Hudson in Halloran hospital, with his handcraft hung on the wall behind his bed.

I was again in an ambulance, headed for a larger station hospital.

"On the way I was terribly thirsty. I asked for a drink. They just gave me some wet cotton soaked in cold water. The flight surgeon pressed that against my lips. He was on one side of me and the chaplain on the other. I felt they knew what was best. But I still wished I could have a drink of water. Then came the operating room."

IN the operating room the nurse winced because he was gripping her hand too tight. The chaplain took over. The anaesthetic engulfed him. The rest he only knows because they told him.

The first operation was a disc operation on the spine. The next was one to remove the right kidney, because of injuries the young gunner sustained when the ammunition belt was hit. When he awoke the second time, one large toe had been slit open to let out a piece of shrapnel, and there were also seams on legs and arms.

Then forty days went by, in a big base hospital in England — time for stitches to come out and for flesh seams to knit. Now he was given another and longer ride, this time to a big general hospital for American soldiers in England.

"There they started physical therapy

treatments on my legs," he says. This is a long and patient and thorough process, designed to induce feeling and strength to return into flaccid muscles. He says that the lack of feeling in his legs seemed at first like being frozen.

After a month in this general hospital, the head doctor told him he was going home. "I guess I was the happiest boy in the world when I heard those words," he remembers. "We were taken to a port and put on a hospital ship. I understand the really bad cases often come back by air — especially if they are coming from the Far East theaters. But the ship seemed wonderful.

"It was a swell trip. We had regular care all the way over. The therapeutic treatments on my legs were continued, but were shorter because there were so many of us. Those nurses were wonderful.

"From the ship in New York we were taken to Halloran General Hospital on Staten Island. I was carried into a great building, and immediately the Red Cross Gray Ladies came around with trays of milk and steaming coffee. I never knew anyone could be so glad to hold a glass of real milk as I was.

"I'll always remember Halloran as the place where I could move my toes and feet

again. I'd try to get movement into my toes but it wouldn't come. Then one morning it did. That was a big day. I had never believed it myself—but I knew some people were afraid I'd never walk again, and that paralysis would be permanent. Since then there's been some improvement every week. After it goes on long enough, I'll be up and around."

In this war, more than ever before, the government's hospitals are centers of specialization. When one hospital has given the particular kind of special treatment a patient needs, he is moved — often flown — to another. From Halloran, young Hudson was sent to Schick General Hospital in Iowa.

"That's where I first got into a walking machine," he said. "It supports me while I move my legs. I'm told little babies often are also taught to walk that way. Improvement has been fast since then."

The ward of an army hospital can be a cheerful place. Fellows in neighboring beds get acquainted and they play games — checkers or chess. Or perhaps they play catch with somebody's knitting yarn. Always, if possible, a wounded soldier is sent finally to the hospital nearest his home. Being in the home area and being visited by family and friends is considered supplementary treatment by the doctors.

There was less regret saying good-bye to friends at Schick when the sergeant was told that his next sojourn was to be at Mayo General Hospital in Galesburg, Illinois. Illinois was home, even if Galesburg wasn't Decatur.

"Besides," he explains, "the army had just made the Galesburg hospital into what is termed a nerve center. That means that the doctors and nurses who had been helping us also moved to Galesburg, and so did many of the patients I knew, and I guess we all felt it was like a new home. Then, when my mother called at Mayo, and told me she had permission from the doctors to take me home for Christmas, it just didn't seem real."

That is the bare outline of the story of just one wounded American. Many things have been left out, as they must be in any story of a brave man's experience. But it is long enough to show, perhaps, that every American who is wounded receives the finest kind of care that our nation has in its power to give.



Dmitri Kodachrome

Good Neighbors at Natal

Liberator Express planes at Natal, in the ATC service.

IN Portuguese the word "Natal" means "Birthday." Used by itself the word refers to the Nativity of Jesus.

My boy and yours may fly a bomber through Natal. Or they may be flown through on a plane of the Air Transport Command. Today Natal is not only one of the busiest places in Brazil. It is one of the most important crossroads of the world.

I flew from Miami to Natal in thirty hours in the same plane. We hit the ground briefly in Puerto Rico and British Guiana — for breakfast and lunch. The crews changed at each place, but the ship kept going. That is characteristic of all our air transport. It keeps going night and day — you are hardly conscious of its enormous power and range.

The South Atlantic Wing in northern

by
Brig. Gen.
John N. Greeley,
U. S. Army, Office of
Coordinator of
Inter-American
Affairs.



Brazil is a bottleneck into which fly planes from the north by various routes. Out of it again the traffic separates. The planes may go to Dakar, Algiers and Naples, or through Morocco to England. They may go through Ascension Island and Accra to Egypt, Iran

Thousands of Liberators have flown through Natal and tens of thousands of our men. It has become a crossroads of the world.

and Russia — or to Arabia, India and China.

The traffic has to move smoothly and it does. It operates like our best railroads used to. If the weather on occasion prevents fly-

ing into some African field, you see the result in twenty-four hours. The dispersal areas at Natal are full of planes and the High Command is busy trying to park some more under their bunks.

This is the greatest war activity in Latin America today. It has been made possible only by the finest sort of cooperation between Brazil and the United States.

A big smiling Colonel met me at Natal. He asked, "Tired, General?"

I said, "A little."

He said, "You will sleep well here. This is the finest climate in the world."

A real estate man or professional greeter in Florida or California couldn't have done it better. He really had something to sell,

before they fly. They gamble gaily, as is the custom of soldiers. They see little of the people of the countries through which they pass; the High Command restricts them to the flying fields. However, a certain proportion will always remember the fruits, the climate, the beauties, and the courteous people of Brazil. Sometime, somehow, they will come back, as we Americans used to go back year after year to Hawaii, to the Riviera or to Paris.

IN addition to the tactical crews, there are lots of interesting people travelling both ways. I met two captains en route who had served under me as sergeants—one in Texas and the other in Iran. At breakfast the next

asked him to smile but he said with tight lips that he couldn't. He had lost all his teeth in China.

I had breakfast with a French General, en route to Algiers with a one-legged Syrian Captain for an aide; lunch with a couple of our own generals on their way to England, and dinner with a delegation of the House Naval Affairs Committee. Another day I had breakfast with a lady bound mysteriously for Liberia; lunch with the Brazilian Minister of Air; dinner with two hundred men of a Service Squadron that works sixteen hours a day sometimes to push the planes through. That is Parnamirim Field at Natal.

Some of the boys who go out in bombers come back in transport planes later on. They may come back as litter cases — flown from the battlefield to a hospital in the United States in weeks, instead of the months that it would take by ships. These are generally special cases, for mass evacuation is still more than our planes can handle. Sometimes there are pitiful mental cases when a boy has broken under strain—and the best thing for all concerned is to get him out of the battle zone quick. Most of the officers and soldiers coming back—except the ferry pilots—have been a long while away. They talk sometimes among themselves of a girl in Algiers, or Italy, or a town in Egypt or India. They are not as young and gay as the boys going out to war.

The mass of the men going through Natal are our own men from the United States. But pilots and crews from all over the world come through this great base, too. There are planes from Canada, bound for Britain or the Mediterranean, with British crews from all over that wide Commonwealth. There are French crews—older than our boys—briefed by their own officers in their own tongue, who are flying American planes into the battle of Europe. More occasionally there are Russians, Poles or Chinese.

These are the people who move east or west. There are others—Americans all—who move north or south, to or from the United States. There are Brazilian airmen and Army officers going to and from our military schools. There is all the commercial traffic of Pan Air do Brazil, which passes through this busy base as normally as do passengers through LaGuardia Field



Dimitri Photo

Our soldiers say hello to a Natal resident.

too. Northeast Brazil lies just under the equator, but the trade winds blow always in from the sea. The beaches are magnificent. This may be the Riviera of the future to many of our people with money in their pockets. Certainly it is to Mr. Johnson of Johnson's Wax and Fibber McGee and Molly. He has a carnauba wax plant and a house on the beach at Fortaleza.

The traffic through the Natal area is huge and picturesque. Most of it goes east, of course, in fighting planes. Some pursuit ships have flown the Atlantic, but the traffic is mostly in bombers—big and very big—and in transports.

The crews are eager and capable. They drink nothing harder than beer the night

morning there was a colored Bishop with a Major for Aide who had been visiting our Negro troops all over the world.

A film star of first magnitude went through just ahead of me. She wanted to give a show at one field where the plane bounced briefly. They told her that if she went out and turned cartwheels on the runways, it would be awfully nice for the mechanics working on the line; but they couldn't stop for a show—they just had twenty minutes for gassing up.

Our photographers got a picture of a flyer home from China wearing straw sandals on crippled feet, an American flag on the front of his flying jacket, and a Chinese inscription identifying him on the back. They

in New York. Natal is very cosmopolitan today.

The freight is as interesting as the passengers. Only the most precious stuff can go by air. It moves into the freight warehouses smoothly. Modern machinery handles the great airplane engines for replacement as readily as sacks of mail and delicate radio parts. It is sorted into priorities. The first priority freight for Karachi, for instance, may half fill a warehouse one morning and be out over the Atlantic that afternoon. Spare parts, big and little, to keep the planes functioning, are all important. To carry them, the pilot may off-load — that is polite language for yanking off the plane — a couple of Generals, some ferry pilots and a lot of mail. There is the most extraordinary variety in freight as in passengers.

All this, of course, is transitory. Today, we are pushing the best that we have in manpower and in material out to the battlefields to the east. But the great airfields through which they pass are as fixed as the Rock of Gibraltar. The fields must be enormously important to Brazil in her future development, and they are important to us.

WHILE the name of Natal has taken on a new significance in the birth of cooperation between this country and Brazil, other Brazilian cities share in the work. There is Recife, the Venice of South America, with the headquarters of our Army and Navy forces there. A hundred years ago it was the center of the sugar industry of the world. There is Fortaleza, the port of the cattle country.

The day I got in, there had been one of those terrible accidents that happen sometimes. A big bomber with its crew of ten had crashed and exploded. The Brazilian Army moved in at once, fought the fire and picked up the bodies. They buried our dead that day with Brazilian soldiers as pall bearers on one side of the caskets, and ours on the other. Then the bugler sounded the Brazilian taps and our own. Soldiers don't forget this sort of thing.

Belem — the Portuguese name for Bethlehem — is another town which, standing at the mouth of the Amazon, is most important in air traffic. There are other vital bases at Amapa, Sao Luiz, Maceio and Bahia, the old capital of Brazil and one of its loveliest cities.

Working through these Brazilian bases, our Armed Forces are doing a grand work in promoting Brazilian-U.S. relations. They deal with those of highest rank and with those of none at all. This air route could not function as it does without the friendly support of military authorities in northern Brazil as well as in Rio.

In Air Transport, Major General Robert L. Walsh was long in command of the South Atlantic Wing, which extends all through northern Brazil. His Brazilian complement was Brigadier Eduardo Gomes, commanding Brazilian Air Forces there. Brigadier Gomes, as one of the Eighteen Immortals, the heroes of an early revolution, has a unique position in his country

a little melting pot into which ran many strains of people from the earliest days. Through its ports and passes came Celts, Greeks, Carthaginians, Romans, Jews, Goths, Arabs, Moors and Africans.

These men were the forefathers of the Portuguese, who moved into a Brazil of many Indian tribes, broke their resistance along the coast, and established colonies from the Orinoco to the River Plata. The early Portuguese colonists fought off the Spanish coming down the Amazon — the French around Rio — the French, Dutch and English alike in Northern Brazil — and took for themselves the largest single country in the Americas. They brought in millions of Africans to work the cane fields of



Dmitri Photo

Our fliers like Natal's gay open-air cafes.

and has been a tower of strength in local Brazilian-United States relations. These two men showed how much two good soldiers can do when they work directly together. The primary job of the South Atlantic Wing is shoving planes through to war — and it is this sort of cooperation all down the line that makes things move smoothly. All through our fields and shops you find Brazilian mechanics trained in our methods.

There is a saying "God is a Brazilian." It carries much the same meaning as "God loves the Irish." It gives some idea of the charm of a people so different from us. It was, of course, the Portuguese who brought the old world into Brazil, and Portugal was

Recife, the mines of Minas Gerais and the coffee plantations above Santos. They started boiling the greatest melting pot in the Western world. The great nation they founded has developed, and is still developing, vast resources over an area much greater than that of the United States.

In Rio de Janeiro, Santos, Recife and Belem, Brazil can boast of greater ports, with more important hinterlands, than the little city of Natal. But no place in the whole great republic is more important in today's history. It remained for the airplane and the birth of transatlantic air transport to make Natal a vital link between the two Americas. In this sense, the town has found its name newly justified.



THE NEW "VOYAGER 125"

Shown above in a wintry scene at St. Louis, you see the first post-war "personal airplane" to be announced by the Stinson Division of Consolidated Vultee. Called the "Voyager 125", it carries 3-4 people with baggage, cruises at 112 miles an hour, has a range of 470 miles, and is powered by a 125 h.p. Lycoming engine.

Production can begin as soon as war-time restrictions are removed, according to James C. Welsch, Stinson sales director. Those who saw it at the December meeting of

the Aviation Distributors and Manufacturers Association in St. Louis were enthusiastic. Said a private owner, "It really jumps into the air. It can take off from any field." A publisher said, "It's the quietest airplane I've ever flown in, bar none." A distributor exclaimed, "It certainly can climb! Now I can get over those Rocky Mountains with ease." And the sales manager for another manufacturer remarked, "I see Stinson haven't lost their touch for coachwork. They always did have the best in the industry."



Above, A Stinson L-1 in Burma, converted into an amphibious plane by the use of floats, and used for evacuating sick and wounded British troops. AAF Photo

PLANES FOR TIGHT PLACES

The Flying Jeep must live in the war zones through its deft maneuverability. It is a sort of David among the Goliaths of combat. Unarmored, it carries only a pilot observer and passenger. Sometimes the passenger is a gunner, sometimes a wounded soldier rescued from a battle area where no other plane could land. The Flying Jeep can take-off from a mid-river sandbar, can evacuate wounded from a jungle-torn clearing. While the Goliaths of the air war are making sensational news of the day, the little Flying Jeep—the Stinson L-5—is quietly endearing itself to thousands of our airmen. Here are some authentic stories about the way these planes are winning their laurels in the war.

IT was in New Guinea. Allied forces were advised through an Australian liaison officer that Japs were approaching a vital landing strip. Five Flying Jeeps were ordered to stand by to ferry Australian Commandos to the threatened area.

All hands turned out at 0500. Two hours later the planes, pilots and Commandos were off for the aerial trek. Each pilot was instructed to enter the valley at a two minute interval following the plane ahead. None was to land unless the lead ship landed.

At approximately 0755 the planes appeared over the designated strip. Circling the field, the fliers spotted an Australian. They decided it was safe to land. But in making the approach the door of each

plane was left open to permit the Aussie Commando in the back of each plane to use his gun if necessary. All engines were kept running. The pilots were instructed not to leave their cockpits.

No ship was on the ground more than two minutes. Speed was paramount. The planes unloaded their Commando passengers without incident, got back to base. Seven trips of this kind were made by each plane, until all the Commandos required for the jungle operation against the Japs were delivered to the spot. The same planes were also used to bring to the Commandos mortars, ammunition and supplies.

The Commandos arrived in time to rout the enemy and kill a Jap Brigadier General. Four Jap prisoners were evacuated

from this strip by the L-5s, a feat which was accomplished by tying the hands of the Japs and placing them on the laps of the Aussies who occupied the rear seats. A wounded Australian was also taken out. The vital airstrip was saved, and a letter of commendation was received by the unit from the Australian General commanding the 11th Division.

That operation is typical of the work being done in New Guinea by the little Stinson planes of the "Guinea Short Line," officially known as the 25th Liaison Squadron.

During just six months last year, the 25th Liaison Squadron flew 14,500 hours, and carried 12,500 passengers, 410,000 pounds of freight, mail, rations, and sup-

plies. More than 65 rescues were performed and flights were made in assistance of 95 other rescues.

New Guinea is one of many jungle areas in which the Flying Jeep — otherwise known as the Stinson L-5 — is doing a job only a small, light plane can put over.

There was an emergency, for instance, in the mountains of Western China. In a world where horror is engulfing millions, it might have seemed a very small emergency. A young man far away from any chance of expert care was stricken suddenly with infantile paralysis. To the airmen who were friends of Second Lieutenant Robert Wesselhoeft, Jr., it seemed the most important thing in the world to bring him through

patient was laid on a platform in its place. He was equipped with a crude artificial respirator in the form of a canvas band across his chest. This was connected with a lever which the plane's pilot could pump up and down with his left arm, while operating the stick and throttle with his right.

In this way the pilot — not missing a stroke with the artificial respirator—cleared a 9,300-foot range with his 200-pound patient, flew the little plane through a terrible storm that once forced him to 15 feet above ground level, and got the paralyzed man back to his base. The next day the patient was flown in a hospital plane over the Hump to Assam, and thence to a hospital in Calcutta.

tation for having almost unique stability and built-in safety.

At the beginning of the present war, many of these old Stinsons were pressed into service by CAP fliers to do jobs never even conceived when the planes were de-



An L-5 in Air Commando operations in Burma, with parachutes under its wings.

alive. The paralysis was of the often fatal kind — affecting the lungs. The 27-year old officer was kept alive for 14 days with artificial respiration. Then they put him in a Flying Jeep, and got him safely out to a hospital.

The young Lieutenant had been stricken while on a ground mission engaged in photo mapping, in an almost uncharted area near the Tibetan border. It was some 100 miles from any airfield. Help was brought by radio, and the first AAF officers arrived by a tortuous trip overland through mountain gorges.

When they found it impossible to take the stricken man back by the same route, they used 250 coolies to build a small runway in three days, on an island in a river. A Flying Jeep was landed there, the back seat of the plane was removed, and the

Major Fred G. Welsh, the pilot who made this remarkable flight, only a few weeks previously had flown the same little plane over the Hump from India to China.

THE Flying Jeep, or Stinson L-5, was originally designed as a liaison plane — that is, a plane to do observation work with the ground forces. With small wingspan and a high degree of stability, the L-5 can take off from terrain impossible for most planes; and it can do so at an angle that permits it to use even a small clearing in a jungle. The plane has enormous power — a 185 h.p. engine.

The Stinson Division brought to the L-5 its pioneering experience in designing the L-1 (once called O-49) for the Air Forces, plus long background in building personal aircraft that had acquired a pre-war repu-



An L-5 flies up a gorge between mountains on a mission over the Salween front, China.

signed. They were even used, for instance, for flying out to sea, on anti-submarine patrols.

Meanwhile the new L-5 was proving itself so versatile in the various war theaters that liaison work is now only one of its uses. It is being flown — particularly in

the Far East — on almost any mission that requires air transport to a point where area for landing and take off is limited and hazardous for larger planes.

In Europe the Flying Jeep is primarily used to run messages between Army headquarters and various front line units. Interestingly enough, in a Flying Jeep outfit like the Air Corps liaison squadron of the Seventh Army, most of the plane pilots are enlisted men rather than officers. There is almost no kind of hurried non-combat mission into which the planes have not been pressed in emergency.

The L-5s have been used, for instance, to evacuate wounded from the front lines and rush them to hospitals. In Italy, a signal

Saipan just three days after the Marine landing on this island, which will doubtless be one of our most important Pacific bases henceforth. They have done the same kind of work over many another Pacific island waste — on Peleliu, for instance. There the Jeeps were taken in on aircraft carriers; and flew off these carriers to scout over terrain so cut by knife-like ridges that it is almost indescribable. The Marines call part of it "Death Valley."

In a Detroit high school last year a tall Air Force Captain mounted the stage before the assembled pupils. As he started talking all the murmurs hushed. He said: "I had been flying heavy bombers on

Our radio man repaired the radio and gave our position to our base. In an unbelievably short time one of our planes was circling over the spot where we had come down. They dropped medical supplies and food and told us that about a mile to the north was a river and in the middle of this river was a sandbar on which one of the small liaison planes might be able to land. It would take me off to where I could receive the proper medical care.

"The rest of the crew made me as comfortable as possible and in a short time carried me to the river. They located the sandbar. It was only 20 feet wide and about 500 feet long. It was covered with water-logged stumps and brush. Everyone worked



← At left, the Flying Jeep is being used to carry a patient.

The Flying Jeep can take off at an unusually abrupt angle.

Below, Lieut. Robert Wesselhoeft, stricken with paralysis, being flown in an L-5 with a respirator over his chest which the pilot operated.

corps officer wanted to inspect telephone wires strung over the tricky Italian telephone system. An L-5 from a liaison unit nearby skimmed him over miles of poles in an hour, and he accomplished as much as he could have done in a week of ordinary ground inspection.

The Marines use Stinson L-5s in what they call their VMO squadrons, there being one such squadron to each division. L-5s observe the enemy, sending back information by radio; they make photographic hops; they make rescues; they serve both infantry and artillery. Usually the only weapons on board are the automatics carried by the pilot and observer; but there have been times when observers have carried carbines or Thompson submachine guns, spraying enemy ground forces as the planes dropped low.

The Flying Jeeps went into action on



AAF Photo

reconnaissance missions in the China-Burma theater. One day, while over a vast area of jungle, we were suddenly attacked by six Jap Zeros. They knocked out two of our motors and a shell exploded right beside my seat. One of the fragments broke my hip. Several others entered my right side, one of them going through my lung.

"I was knocked out. My co-pilot took over and we made a crash landing through a network of jungle trees. We were down miles away from any friendly territory.

hard for about two hours clearing it off. Then a tiny Stinson appeared over the tops of the trees. It circled overhead several times while the pilot looked the situation over, then he came in and made a perfect landing. They quickly loaded me into the back seat of the plane and made me as comfortable as possible. The pilot locked his brakes and gunned his motor, and when it was turning over at a great rate he released his brakes and just as we reached the end of the sandbar we were airborne. I was on my way to a base hospital.

"In an hour and a half I was on an operating table and my life had been saved."

The Air Force Captain stepped off the stage, amid a silence unusual in a high school auditorium.

The sequel to his story was that the students, assembled there for a war bond rally, went over their quota and sold over \$100 in E bonds for each student enrolled. The students named and sponsored four Stinson L-5B ambulance planes.

To build even a single airplane requires scores of thousands of intra-plant communications. To build thousands of airplanes a year, in the many different cities where Consolidated Vultee plants are located, requires communications that are counted by millions annually.

One bottleneck to production was broken by Consolidated Vultee in 1944 by establishing a direct private-wire communications network which extends throughout the United States.

The need for the system became evident when work was begun on the new Dominator B-32s, early in the year. With plants and subcontractors scattered all over the country, company officials found countless valuable hours being lost each week in the process of sending and receiving vital messages *via* overcrowded public communications facilities. Then came along the proposal to lease private wires and standardize operating procedures throughout the organization. The entire network was established in a period of less than three months.

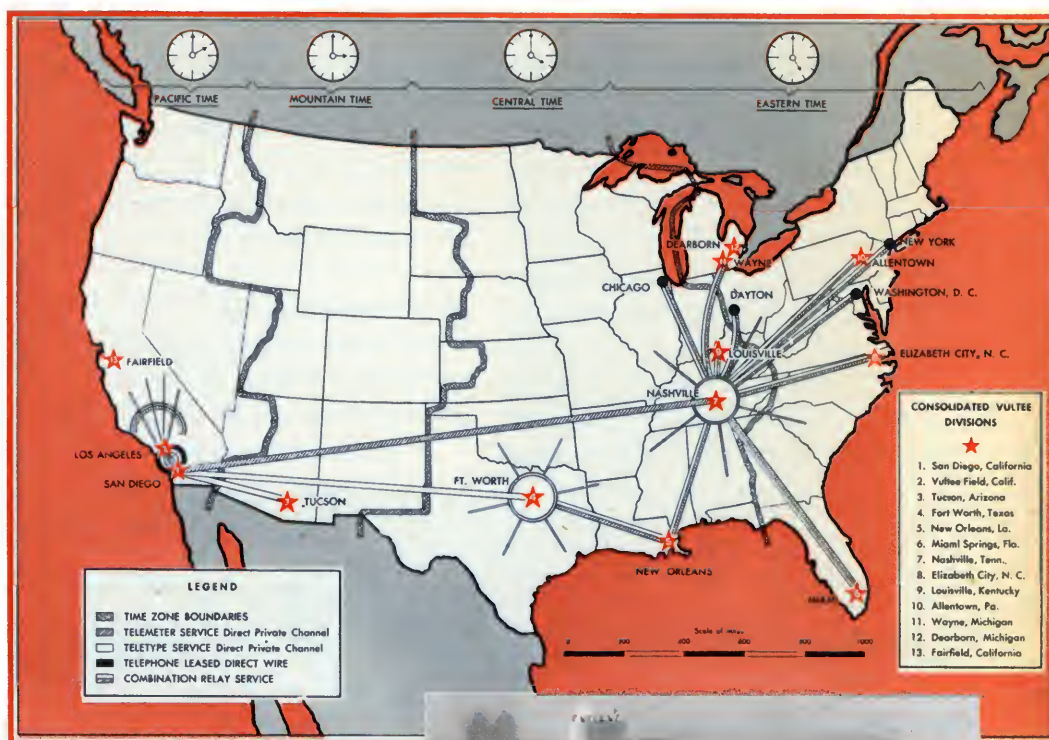
First line of the system — a Bell Simplex channel, extending a little more than a hundred miles from San Diego to Downey — was ready for service on November 1, 1944. The second and longest line — a Western Union Duplex channel, extending more than 1800 miles from San Diego to Nashville — went into operation only ten days later.

The system was complete on December 1, 1944, with four channels extending from the main-plant hub at San Diego. The last two channels were Bell Simplex and Duplex circuits, with wires running from San Diego to Tucson and Fort Worth, respectively.

Although the system extends directly to only four key cities — San Diego, Tucson, Fort Worth and Nashville — it can be utilized by the company's subcontractors and representatives throughout the United States by means of a special relay set-up. For example, if an official at Elizabeth City wishes to send a wire to Tucson, the message is relayed (utilizing special switching equipment) through automatic teletype or telemeter machines at Nashville and San Diego so that it reaches its destination with but a fractional part of the manual handling formerly required.

Due to previous transmission delays, it used to take from one to four hours to

SPEAKING OF AIRPOWER



Above, the nation-wide spread of the Consolidated Vultee organization, with the key cities linked by direct wire. At right, one of the Bell Telemeter machines, used for automatic relaying of messages from various plants scattered coast to coast.



transmit a message from coast to coast. Today, thanks to the new communications system, a company representative at Buffalo was recently able to get a priority message through to San Diego in less than five minutes. Similarly, Nashville officials now find that they can send messages to Fort Worth *via* San Diego quicker than they can get a direct public-wire connection with the Texas plant.

Speedy message transmission is particularly important to Consolidated Vultee because the various units of the company are scattered throughout so many time zones. Before the new communications system was established, it was necessary for company officials on the West Coast to send all their telegraphic messages to the East Coast be-

fore noon (California time) in order to be sure that the messages would be received prior to the day's end (New York time).

This sometimes meant that as many as twenty-four hours would elapse before important orders could be conveyed to East Coast subcontractors. Consequently, shortages would later occur on West Coast assembly lines and much-needed airplanes could not be turned over to the Army or Navy on precise schedule.

With the new leased-wire communications system, the company's executives are able to take advantage of every minute of the day throughout the country; delays are avoided and costs are reduced; and Consolidated Vultee is able to operate more efficiently than ever before.

Don't miss it!

The screen version of Moss Hart's great stage hit—
presented by 20th Century-Fox, in association with
the United States Army Air Forces.

"Winged Victory" is the name given by the heroes
in the film to the Consolidated Vultee B-24 Liberator
bomber used in the picture.



MOSS HART'S

Winged Victory



All profits from production and distribution go to Army Charities.



A.A.P. Kodachrome

RUINS AT ROUEN

Rouen is one of the great history-packed cities of Europe. Joan of Arc was burned there in the market place. The great Cathedral, so near the scene of her tribulation, is one of the world's sublime monuments bequeathed our time by the men of an unmechanized age. Rouen stands about half-way between Paris and the sea, on the Seine; it is a great port, because ocean-going boats can come inland as far as Rouen and unload their cargoes there for rail shipment to Paris. The Cathedral stands about half way between the river and the railroad station. The importance of Rouen as a port explains why this area had to be bombed when it was in German hands; you see here the ruins of one of the two main vehicular bridges across the river, and the surrounding demolition, partly by fire, which unfortunately had to destroy many historic old buildings. That the Cathedral still survives may be taken as a tribute to the precision bombing of our airmen, whose duty it was to destroy the usefulness of the port.